Texas Forensic Science Commission

Justice Through Science

FINAL REPORT ON COMPLAINT BY THE HARRIS COUNTY CRIMINAL LAWYER'S ASSOCIATION AGAINST THE HARRIS COUNTY INSTITUTE OF FORENSIC SCIENCES AND FESSESSEWORK GUALE

February 2, 2018

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I. SUMMARY OF THE COMMISSION'S STATUTORY AUTHORITY

A. Legislative Background and Membership

The Texas Legislature created the Texas Forensic Science Commission ("Commission") during the 79th Legislative Session by passing House Bill 1068 (the "Act"). The Act amended the Texas Code of Criminal Procedure to add Article 38.01, which describes the composition and authority of the Commission.[1] During subsequent Legislative Sessions, the Legislature further amended the Code of Criminal Procedure to clarify and expand the Commission's jurisdictional responsibilities and authority.[2]

The Commission has nine members appointed by the Governor of Texas.[3] Seven ofthe nine commissioners are scientists or medical doctors and two are attorneys (one prosecutor nominated by the Texas District and County Attorney's Association, and one criminal defense attorney nominated by the Texas Criminal Defense Lawyer's Association).[4] The Commission's Presiding Officer is Jeffrey Barnard, MD. Dr. Barnardis the director of the Southwestern Institute of Forensic Science and the Chief Medical Examiner of Dallas County, Texas.[5]

B. Accreditation Jurisdiction

Texas law prohibits forensic analysis from being admitted in criminal cases if the entity conducting the analysis is not accredited by the Commission:[6]

> "…a forensic analysis of physical evidence under this article and expert testimony relating to the evidence are not admissible in a criminal action if, at the time of

[1] *See* Act of May 30, 2005, 79th Leg., R.S., ch. 1224, § 1, 2005.
[2] *See e.g.,* Acts 2013, 83rd Leg., ch. 782 (S.B.1238), §§ 1 to 4, eff. June 14, 2013; Acts 2015, 84th Leg., ch. 1276 (S.B.1287), §§ 1 to 7, eff. September 1, 2015, (except TEX. CODE CRIM. PROC. art. 38.01 § 4-a(b) which takes effect January 1, 2019).
[3] *Id.* at art. 38.01 § 3.
[4] *Id.*
[5] *Id.* at § 3(c).
[6] Until the 84th Legislative Session, the accreditation program was under the authority of the Department of Public Safety ("DPS").

> the analysis, the crime laboratory conducting the analysis was not accredited by the commission under Article 38.01."[7]
>
> The term "forensic analysis" is defined as follows:
>
> "Forensic analysis" means a medical, chemical, toxicologic, ballistic, or other expert examination or test performed on physical evidence, including DNA evidence, for the purpose of determining the connection of the evidence to a criminal action, except that the term does not include the portion of an autopsy conducted by a medical examiner or other forensic pathologist who is a licensed physician.[8]
>
> The term "crime laboratory" is broadly defined, as follows:
>
> "Crime laboratory" includes a public or private laboratory or other entity that conducts a forensic analysis subject to this article.[9]

Texas law exempts certain forensic disciplines from the accreditation requirement by statute or administrative rule.[10] The complaint and related disclosures in this case involve toxicology, a forensic discipline subject to accreditation under Texas law. The Harris County Institute of Forensic Sciences ("HCIFS"), which is the laboratory that is the subject of this complaint and self-disclosure, is accredited by the ANSI-ASQ National Accreditation Board ("ANAB") under the International Organization for Standardization ("ISO") accreditation standard 17025.

C. Investigative Jurisdiction

Texas law requires the Commission to "investigate, in a timely manner, any allegation of professional negligence or professional misconduct that would substantially affect the integrity of the results of a forensic analysis conducted by an accredited laboratory, facility or entity."[11] The Act also requires the Commission to : (1) implement a reporting system through which accredited laboratories, facilities or entities may report

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[7] TEX. CODE CRIM. PROC. § 38.35(a)(4).
[8] *Id.* at 38.35 § (a)(4).
[9] *Id.* at § 38.35(d)(1).
[10] *Id.* at 38.01 § 4-d(c).
[11] TEX. CODE CRIM. PROC. art. 38.01 § 4(a)(2).

professional negligence or professional misconduct; *and* (2) require all laboratories,facilities or entities that conduct forensic analyses to report professional negligence or misconduct to the Commission.[12]

II. INVESTIGATIVE PROCESS

A. Complaint and Disclosure Process

When the Commission receives a complaint or self-disclosure, the Complaint and Disclosure Screening Committee conducts an initial review of the document at a publicly noticed meeting. (*See* Policies and Procedures at 3.0). After discussing the complaint or disclosure, the Committee votes to recommend to the full Commission whether the issues presented in the complaint or disclosure merit any further action. *Id.*

In this case, the Commission received the following: a complaint from the Harris County Criminal Lawyer's Association ("HCCLA") (**Exhibit A**); a self-disclosure from the Harris County Institute of Forensic Sciences (**Exhibit B**); and a letter request from theHarris County District Attorney's Office ("HCDAO") seeking the Commission assistance with reviewing the issues raised in the HCCLA complaint and HCIFS self-disclosure (**Exhibit C**).

On October 5, 2016 the Commission discussed the complaint at its publicly noticed quarterly meeting in Austin, Texas. After deliberation, the Commission voted unanimously to create a 3-member investigative panel to review the disclosure pursuant to Section 3.0(b)(2) of the Policies and Procedures. Members voted to elected Dr. Sarah Kerrigan, Dr. Jasmine Drake and Mr. Mark Daniel as members of the panel, with Dr. Kerrigan serving as Chairperson.

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[12] *Id.* at *§ 3.*

Once a panel is created, the Commission's investigation includes: (1) document and data review; (2) interviews with members of the laboratory as necessary to assess the facts and issues raised; (3) collaboration with the laboratory's accrediting body and any other relevant investigative agency; (4) requests for follow-up information where necessary; (5) hiring of subject matter experts where necessary; and (6) any other steps needed to meet the Commission's statutory obligations.

In the course of investigating this matter, Commission staff spoke the following individuals at HCIFS: Dr. Teresa Gray (Chief Toxicologist); Dr. Warren Samms (Director of Chemistry and Toxicology); Dr. Roger Kahn (Laboratory Director); and Ms. Michal Pierce (Quality Director). Commission staff also spoke with former HCIFS Laboratory Director Ashraf Mozayani. Staff attempted to speak with Dr. Fessessework Guale but received no response from Dr. Guale's attorney. The Commission has no authority to subpoena individuals or otherwise compel them to speak with staff or members. Staff consulted with the HCCLA and HCDAO at various points during the review process. Staff also reviewed extensive documents submitted by HCIFS and the HCCLA.

B. Components of Commission Reports

Under Section 38.01 of the Texas Code of Criminal Procedure, a Commission investigation of an accredited crime laboratory and an accredited forensic discipline must include the preparation of a written report that "identifies and also describes the methods and procedures used to identify": (A) the alleged negligence or misconduct; (B) whether the negligence or misconduct occurred; (C) any corrective action required of the laboratory, facility, or entity; (D) observations of the Commission regarding the integrity and reliability of the forensic analysis conducted; (E) best practices identified by the Commission during

the course of the investigation; and (F) other recommendations that are relevant, as determined by the Commission. TEX. CODE CRIM. PROC. § 38.01, Sec. 4(b)(1).

In addition, the investigation may include one or more: (A) retrospective reexaminations of other forensic analyses conducted by the laboratory, facility, or entity that may involve the same kind of negligence or misconduct; and (B) follow-up evaluations of the laboratory, facility, or entity to review: (i) the implementation of any corrective action required ; or (ii) the conclusion of any retrospective reexamination under paragraph (A). *Id.* at Sec. 4(b)(2).

C. Limitations on the Commission's Authority

The Commission's authority contains important statutory limitations. For example, no finding contained herein constitutes a comment upon the guilt or innocence of any individual. TEX. CODE CRIM. PROC. 38.01 at § 4(g); Policies and Procedures at § 4.0(d). In addition, the Commission's written reports are <u>not</u> admissible in a civil or criminal action. (*Id.* at § 11; *Id.* at § 4.0(d).)

The Commission also does not have the authority to issue fines or other administrative penalties against any individual or laboratory. The information it receives during the course of any investigation is dependent upon the willingness of the forensic laboratory or other entity under investigation and other concerned parties to submit relevant documents and respond to questions posed. The information gathered has **<u>not</u>** been subjected to the standards for admission of evidence in a courtroom. For example, during on-site and telephone interviews, no individual testified under oath, was limited by either the

Texas or Federal Rules of Evidence (*e.g.,* against the admission of hearsay) or was subjected to formal cross-examination under the supervision of a judge.

Moreover, documents obtained during the course of interviews have not been subject to any independent validation. For example, if the Commission receives an email from a laboratory or individual, and the email indicates it was sent on a given date at a given time, the Commission assumes this information is accurate and has not been altered. The Commission requests information from the laboratory and other concerned parties based on its understanding of the facts as presented in the complaint or self- disclosure and relies on the parties to provide supplemental information if they believe such information will shed light on the Commission's review of a given complaint or self-disclosure. Because the Commission has no authority to subpoena documents, it relies on the parties' willingness to cooperate with the investigation.

III. SUMMARY OF COMPLAINT

On September 8, 2016, the HCCLA submitted a complaint to the Commission requesting investigation of the following (**Exhibit A**):

1. Dr. Guale's qualifications to be testifying as an expert witness;
2. Misrepresentations on Guale's Statement of Qualifications regarding her credentials;
3. Validity of Guale's American Board of Forensic Toxicology (ABFT) certification;
4. Guale's "perjured testimony" in court;
5. Inconsistent testimony regarding headspace gas chromatography data;
6. "Junk science" testimony regarding retrograde extrapolation; and
7. HCIFS' "failure to issue a CAR" for the misrepresentations and related allegations.

A. Analysis of Professional Negligence and Misconduct

Article 38.01 of the Texas Code of Criminal Procedures requires the Commission to describe whether professional negligence or misconduct occurred in this case. Neither "professional negligence" nor "professional misconduct" is defined in the statute. The Commission has defined both terms in its policies and procedures. (Policies and Procedures at 1.2.)[13]

At its November 3, 2017 meeting, the Commission unanimously voted to issue a finding of professional negligence against Guale. The term "professional negligence" is defined in Section 1.2 of the Commission's Policies and Procedures as follows:

> "Professional Negligence" means the actor, through a material act or omission, negligently failed to follow the standard of practice generally accepted at the time of the forensic analysis that an ordinary forensic professional or entity would have exercised, and the negligent act or omission would substantially affect the integrity of the results of a forensic analysis. An act or omission was negligent if the actor should have been but was not aware of an accepted standard of practice required for a forensic analysis. (Policies and Procedures at 1.2)

B. Professional Negligence vs. Professional Misconduct

The Commission finds Guale was professionally negligent in failing to convey that her degree was a Master's degree in Physiological Sciences with coursework in Toxicology, as opposed to a Master's degree in Toxicology. In addition, the Commissionfinds Guale was professionally negligent in providing confusing and inconsistent explanations of technical and scientific concepts during testimony, especially with respect to retrograde extrapolation (*See* **Exhibits E-F**). Because the Commission was unable to speak with Guale, and the only public statements available are media interviews, it was not possible for the Commission to assess Guale's intent sufficient to issue a finding of professional

[13] The Commission's policies and procedures have been developed into administrative rules and will ultimately be published in 37 TEX. ADMIN. CODE §15.

misconduct HCIFS concluded that Guale did not appreciate the consequences of her inaccurate testimony for the laboratory or the criminaljustice system.

The term "professional misconduct" is defined in the Commission's policies and procedures as follows:

> "Professional Misconduct" means the actor, through a material act or omission, deliberately failed to follow the standard of practice generally accepted at the time of the forensic analysis that an ordinary forensic professional or entity would have exercised, and the deliberate act or omission would substantially affect the integrity of the results of a forensic analysis. An act or omission was deliberate if the actor was aware of and consciously disregarded an accepted standard of practice required for a forensic analysis. (Policies and Procedures at 1.2)

This definition requires the Commission to establish a deliberate (i.e., intentional) act or omission, which the Commission was unable to do given the fact that Guale resigned from the laboratory in September 2016, before the complaint and laboratory self-disclosure were filed.

C. Dr. Guale's Qualifications and Misstatements on SOQ

At the time this complaint was filed, Guale was the Toxicology Analytical Operations Manager for HCIFS. During the criminal trial of a case for which Guale was a State's expert, Guale had difficulty explaining her qualifications. This resulted in a Harris County Assistant District Attorney ("ADA") expressing concern to HCIFS management. When management reviewed the testimony with the ADA, they discoveredGuale misstated the title of her Master of Science degree. She stated she had a Master's Degree in Toxicology from Oklahoma State University when in fact she had a Master's Degree in Physiological Sciences with coursework in toxicology.[14]

[14] The laboratory is unable to verify whether Guale's diploma was submitted when she was hired or at a later point during her employment.

The degree listed on Guale's transcript and diploma (Master's in Physiological Sciences) did not match what was written on her job application, CV, or SOQ (Master's in Toxicology). Assuming Guale submitted her diploma when she was hired, it was not effectively compared to her application form, CV or SOQ.

Testimony by Toxicology staff, particularly managers, were historically evaluated primarily by attorneys, not laboratory staff with technical expertise. Earlier monitoring may have caught the misrepresentation on the stand but only if the monitor was aware of Guale's degree as stated in her diploma. The lab concluded Guale's misstatement on the stand constituted violations of two applicable codes of ethics:

- The ASCLD/LAB Guiding Principles of Professional Responsibility for Crime Laboratories and Forensic Sciences requires that a forensic expert "accurately represent his/her education, training, experience, and area of expertise."

- The American Board of Forensic Toxicology expects all certificate holders to follow the ABFT Code of Ethics, among which is the requirement to "Perform all professional activities in Forensic Toxicology with honesty and integrity, and refrain from any knowing misrepresentation of their professional qualifications, knowledge and competence, evidence and results of examinations, or other material facts."

At the Commission's November quarterly meeting, laboratory management noted that at the time Guale was hired it was not common practice to compare the degree listed on an applicant's diploma with the degree listed on the submitted application and CV. The laboratory has since changed its process for credential review as discussed below.

During the root cause analysis and corrective action process, HCIFS noted that Guale met the criteria for her initial and ultimate job descriptions and was qualified to

perform her required duties with the Master's degree in Physiological Sciences. There was no need for her to misrepresent credentials to gain employment or a promotion.

D. Validity of ABFT Certification

HCIFS contacted the American Board of Forensic Toxicology ("ABFT") to disclose the issues set forth herein because ABFT is an accrediting body for HCIFS. HCIFS management also reviewed the certification qualification rules and determined that Guale's certification status would not have been impacted had she accurately represented her degree as a Master's in Physiological Sciences as opposed to a Master's in Toxicology.

E. Guale's "Perjured Testimony" re: Qualifications

The Commission does not have jurisdictional authority to assess whether Dr. Guale perjured herself during testimony. The HCDAO is responsible for investigating allegations of criminal activity. The Commission's understanding in speaking with the HCDAO is that the matter was brought before a grand jury but it returned a no bill.

F. Substantive Concerns re: Scientific Testimony

HCIFS performed two reviews of all Guale trial transcripts provided by the Harris County DA's office. The first review was performed in May 2017 and the second in July 2017. A total of 32 transcripts were reviewed. The transcripts were reviewed for the purpose of flagging substantive technical issues in testimony.

One of the technical areas of greatest concern in Guale's testimony was retrograde extrapolation.[15] *Mata vs. State of Texas* holds an expert witness to a high standard when

[15] HCCLA also complained about inconsistent testimony regarding headspace gas chromatography data. After reviewing the transcript excerpts and speaking with the laboratory, the panel concluded these concerns had reasonable explanations while the other substantive issues discussed herein did not.

testifying to retrograde extrapolation. [16] The Commission concurs with HCIFS' observation that Guale's testimony was at times unclear, contradictory or without sufficient explanation, problems that *Mata* cautions against. The Commission also concurs with HCIFS' statement that "ascertaining whether Dr. Guale possessed sufficient knowledge of forensic toxicology principles and their proper application to testimony was difficult from the reviewed transcripts because her testimony lacked detail and clarifying explanations."

Guale's responses clearly demonstrated that she relied on the BACTracker software for extrapolation-related calculations, and she was unable to convince the court that she appropriately understood the underlying ethanol pharmacokinetics upon which the software is based. This demonstrates the danger of relying too heavily on software programs, as such reliance can obscure an in-depth understanding of key foundational concepts.

During second transcript review in July 2017, HCIFS again observed that Guale provided unclear and contradictory testimony regarding extrapolation and absorptive state. For example, in *Lengua* and *Sechrist,* she described the time of first and last drink as the "most important" or "most crucial" variables for extrapolation, but in *Arnold, Lengua, Ronald Rodriguez* and *Ulloa*, she said such information was not necessary.

In at least five cases reviewed (*Cisneros, Lenguea, K. Nguyen, Richardson,* and *Ronald Rodriguez*), Guale provided extrapolation testimony without having any information about the drinking history. In various transcripts, she voluntarily testified to or agreed with an attorney's representation of inaccurate information. Again, it is difficult to determine

[16] *Mata v. State*, 13 S.W.3d 1 (Tex. App.-San Antonio 1999), rev'd, 46 S.W.3d 902 (Tex. Crim. App. 2001).

whether these are attributable to her imprecise communication or an actual lack of knowledge in the subject area. In *Johnson-Cervera* and *Ronald Rodriguez*, she testified that side effects for alprazolam and tramadol, respectively, are present only whenthe drug is not used as prescribed. This is another example of inappropriate testimony regarding key concepts in toxicology.

In sum, the concerns raised by the HCCLA regarding retrograde extrapolation testimony and related concepts were substantiated by the review of Guale's transcripts. Due to the unreliable nature of Guale's testimony regarding key scientific concepts, any case in which she provided testimony should be reviewed by the HCDAO and defense representatives to assess the materiality of the testimony to the case outcome and determine whether any legal relief is appropriate. This is especially critical for those cases in which the resulting BAC was on the border of the statutorily defined legal limit.

G. HCIFS' Alleged Failure to Take Corrective Action

HCIFS has taken extensive corrective action including thorough root cause mapping (*See* **Exhibit D**). Additionally, the laboratory has a new laboratory director and new Chief Toxicologist. The following are preventative changes that were implemented after the problems with Guale's testimony were discovered:

- Lab policy was changed to require supporting records to be submitted with every SOQ and CV revision.
- Management re-emphasized existing IFS testimony monitoring policy to stress the importance of managers receiving direct testimony observation by IFS personnel.
- Management initiated further ethics discussions with the staff to ensure all understood the severity and ramifications of misrepresenting credentials.
- All SOQs and CVs have been updated with supporting records.

- All toxicology analysts who testify were individually assessed by new Chief Toxicologist to ensure competency.
- Management implemented more rigorous courtroom testimony training.

Though the corrective action and supporting documentation may not have yet been disclosed to the complainant at the time this complaint was filed, the Commission finds the laboratory has since performed a thorough assessment of the relevant transcripts and taken appropriate corrective action to protect against recurrence of the issues identified herein.

IV. CLOSING OBSERVATIONS/RECOMMENDATIONS

Though current HCIFS laboratory management was not responsible for the failure of HCIFS to vet Guale's qualifications, there was insufficient attention to detail during the candidate vetting process which could have prevented the problems described herein. It also demonstrates the critical importance of rigorous testimony training and monitoring by experts who are qualified to evaluate not only courtroom demeanor, but also the appropriateness and validity of the scientific concepts expressed. Testimony evaluation by legal representatives is simply insufficient to flag the types of substantive technical concerns described in this report. The risk of leaving testimony monitoring to attorneys must be appreciated not only by HCIFS as a result of this complaint and self-disclosure, but also by all other Texas laboratories whose staff testify in Texas criminal courts.

EXHIBIT A

HARRIS COUNTY CRIMINAL LAWYERS ASSOCIATION

POST OFFICE BOX 924523 HOUSTON, TEXAS 77292-4523

713-227-2404
FAX 713-869-5051
www.HCCLA.ORG

September 8, 2016

Kathryn Adams
Commission Coordinator
Texas Forensic Science Commission
1700 North Congress, Ste. 445
Austin, TX 78701

RE: Harris County Institute of Forensic Science Employee Fessesswork Guale

Enclosed, please find a complaint being filed against Fessesswork Guale by the Harris County Criminal Lawyers Association. We are requesting an investigation into:

1. Guale's qualifications to be testifying as an expert witness in trial,
2. Her misrepresentations on her Statement of Qualifications that is required for lab accreditation,
3. The validity of her American Board of Forensic Toxicologists certification based on these misrepresentations about her education,
4. Her perjured testimony in court,
5. Her inconsistent testimony regarding Headspace Gas Chromatography data in court,
6. Her "junk science" testimony in court regarding retrograde extrapolation without adequate scientific authority for her opinions,zx
7. HIFS' failure to file any Corrective Action Preventative Action reports for this incident or anything else.

Supporting exhibits regarding these allegations are attached.

Thank you for your time investigating this matter. I can be reached at office@tylerflood.com or by calling 713.224.5529.

Tyler Flood

President, HCCLA

1. PERSON COMPLETING THIS FORM

Name: Harris County Criminal Lawyers Association
Address: P.O. Box 924523
City: Houston
State: Texas Zip Code: 77292-4523
Home Phone:
Work Phone: (713) 227-2404
Email Address *(if any)*: tyler@tylerflood.com

2. SUBJECT OF COMPLAINT

List the full name, address of the laboratory, facility or individual that is the subject of this disclosure:

Individual/Laboratory: F. Guale - Harris County Institute of Forensic Sciences
Address: 1885 Old Spanish Trail
City: Houston
State: Texas Zip Code: 77054
Date of Examination, Analysis, or Report: Numerous Cases
Type of forensic analysis: Toxicology
Laboratory Case Number *(if known)*: Numerous Cases

Is the forensic analysis associated with any law enforcement investigation, prosecution or criminal litigation?
Yes ☒ No ☐

* If you answered "Yes" above, provide the following information *(if possible)*:

* Name of Defendant: Numerous Cases Effected

* Case Number/Cause Number:
(if unknown, leave blank)

* Nature of Case:
(e.g burglary, murder, etc.)

* The county where case was investigated, prosecuted or filed:

* The Court:

* The Outcome of Case:

* Names of attorneys in case on both sides *(if known)*:

Your relationship with the defendant:

Self	☐	Family Member	☐
Parent	☐	Friend Attorney	☐
None	☐	Other *(please specify)*:	

HCCLA members have represented hundreds of defendants that may be effected by Dr. Guale's misconduct.

If you are not the defendant, please provide us with the following information regarding the defendant:
Name: Hundreds of defendants charged with offenses in Harris County
Address *(if known)*:
Home Phone:
Work Phone:

3. WITNESSES

Provide the following about any person with factual knowledge or expertise regarding the facts of the disclosure. Attach separate sheet(s), if necessary.

First Witness *(if any)*:
Name: Tyler Flood
Address: 1229 Heights Blvd., Houston, Texas 77008
Daytime Phone: (713) 224-5529
Evening Phone: (713) 480-5529
Fax: (713) 224-5533
Email Address: tyler@tylerflood.com

Second Witness *(if any)*:
Name:
Address:
Daytime Phone:
Evening Phone:
Fax:
Email Address:

Third Witness *(if any)*:
Name:
Address:
Daytime Phone:
Evening Phone:
Fax:
Email Address:

4. DESCRIPTION OF COMPLAINT

Please write a brief statement of the event(s), acts or omissions that are the subject of the disclosure.

Dr. Fessessework Guale has been employed with the Harris County Institute of Forensic Sciences (HCIFS) for approximately 20 years and has been testifying in criminal cases for HCIFS for 10 years. The Harris County District Attorney's Office relies on Dr. Guale to testify in criminal cases that involve blood drug and blood ethanol analysis. Dr. Guale also provides testimony in the effects of alcohol and drugs on the human body. Dr. Guale has testified that she obtained a master's of science in Toxicology from Oklahoma State University. Her Curriculum Vitae and ASCLAD/LAB - International Statement of Qualifications also represent that Dr. Guale obtained an MS in Toxicology. HCCLA was recently notified by the Harris County District Attorney's Office that Dr. Guale does not hold a master's in Toxicology. After reviewing court transcripts, it appears that Dr. Guale testified falsely in hundreds on criminal case. In addition, Dr. Guale's testimony regarding the underlying science of blood drug and blood ethanol analysis is inconsistent and her expert opinion changes from trial to trial. Dr. Guale will provide extrapolation testimony even if the evidence shows that an individual is still in the absorption phase and without all of the personal facts needed to provide a scientifically reliable retrograde extrapolation. We also have discovery with chromatograms that do not match the labs calibration curve in blood ethanol cases. Dr. Guale was unable to provide an explanation as to way the results in the chromatograms provided to defense counsel do not match the values on the calibration curve for the batch run for the sponsored BAC result. Finally, though the laboratory is required through a discovery order, to provide defense counsel with corrective action/preventative action reports (CAPAs), the Harris County Defense Bar has yet to see a CAPA released by HCIFS.

5. EXHIBITS AND ATTACHMENT(S)

Whenever possible, disclosures should be accompanied by readable copies **(NO ORIGINALS)** of any laboratory reports, relevant witness testimony, affidavits of experts about the forensic analysis, or other documents related to your disclosure. Please list and attach any documents that might assist the Commission in evaluating the complaint. Documents provided will **NOT** be returned. List of attachments:

Exhibit #1: Notice from the Harris County District Attorney's Office regarding Fessessework Guale.
Exhibit #2: Fessessework Guale's Curriculum Vitae
Exhibit #3: Fessessework Guale's ASCLAD/LAB - International Statement of Qualifications
Exhibit #4: Various court transcripts of Fessessework Guale's testimony
Exhibit #5: Chromatograms related to issues with HCIFS calibration curves
Exhibit #6: New articles related to Fessessework Guale

6. YOUR SIGNATURE AND VERIFICATION

By signing below, I certify that the statements made by me in this disclosure are true. I also certify that any documents or exhibits attached are true and correct copies, to the best of my knowledge.

Signature:

Date Signed: 2016-09-08

EXHIBIT 1

Belinda Hill
First Assistant

Criminal Justice Center
1201 Franklin, Suite 600
Houston, Texas 77002-1901

HARRIS COUNTY DISTRICT ATTORNEY
DEVON ANDERSON

September 6, 2016

NOTICE CONCERNING EXPERT WITNESS DR. FESSESSEWORK GUALE

The Harris County District Attorney's Office was informed today that Dr. Fessessework Guale of the Harris County Institute of Forensic Sciences may have testified in past trials that she received her Master's of Science degree in Toxicology when, in fact, she received her Master's of Science degree in Physiological Sciences (with coursework and research in toxicology).

Please disseminate this information to your membership and/or employees for their review.

The District Attorney's Office will facilitate specific requests for review of Dr. Guale's trial testimony in Harris County prosecutions from 2006 to present. All requests should include the cause number and court in which the case was tried. Requests may be submitted in writing to me at Chandler_Inger@dao.hctx.net.

Sincerely,

Inger Chandler
Assistant District Attorney
Harris County, Texas

EXHIBIT 2

Curriculum Vitae

Fessessework Guale. DVM, MS, D-ABVT, D-ABFT-FT
Harris County Institute of Forensic Sciences
1885 Old Spanish Trail
Houston, TX 77054
Phone: 713-796-6908
Fax: 713-796-6838
Fessessework.guale@ifs.hctx.net

Education

1993-1996: Oklahoma State University, Stillwater, OK

- **MS**: Toxicology, Physiological Sciences, College of Veterinary Medicine
- **Thesis**: Evaluation of Chick Embryo Motoneurone Cultures for the Study of Neurotoxicity. Published in 1997.

1985-1990: Addis Ababa University, Ethiopia

- **DVM**: College of Veterinary Medicine
- **Thesis**: Prevalence of Coccidiosis and Identification of *Eimeria* Species

1981-1983: Addis Ababa University, Ethiopia

- **BS**: Animal Science, College of Agriculture

Professional Experience

May 2013-present: Toxicology Analytical Operations Manager: Harris County Institute of Forensic Sciences

- Manage the daily operation of the Laboratory
- Perform technical, administrative and expert review of completed cases
- Provide consultations and toxicological interpretations to pathologists and law enforcement personnel
- Provide expert testimony in court
- Oversee the QA/QC operation of the laboratory
- Oversee the training and continuing education of staff members
- Hire subordinate staff
- Prepare annual budget for the laboratory
- Perform yearly performance evaluation of toxicology laboratory employees
- Prepare and present scientific articles

May 2011-May 2013: Assistant Chief Toxicologist: Harris County Institute of Forensic Sciences, Forensic Toxicology Section.

- Manage the daily operation of the toxicology laboratory
- Perform technical, administrative and expert review of completed cases
- Provide consultations and toxicological interpretations to pathologists and law enforcement personnel
- Provide expert testimony in court
- Plan and execute method development projects
- Prepare and present scientific articles
- Oversee the QA/QC operation of the laboratory
- Oversee the training and continuing education of staff members
- Hire subordinate staff
- Prepare annual budget for the laboratory
- Perform yearly performance evaluation of toxicology laboratory employees
- Prepare and present scientific articles

June 2008- May 2011: Toxicologist I: Harris County Institute of Forensic Sciences, Forensic Toxicology Section

- Manage and plan the daily operation of the toxicology laboratory
- Technical and administrative review completed cases
- Maintain laboratory compliance with quality control and quality assurance and accreditation by ABFT and ASCLAD/LAB.
- Provide expert witness in the court of law

June 2006- June 2008: **Toxicologist II Specialist**: Harris County Medical Examiners Office, Forensic Toxicology Section.

- **GC/MS Section Team Leader**: Provide leadership in all the activities of the section
- Technically review analytical data in the section
- Perform technical review and administrative review of completed cases
- Facilitate the completion of cases in a timely manner
- Responsible for troubleshooting instrument malfunctions and contact service technicians when necessary
- Review standard operating procedures, make necessary adjustments and/or changes to improve the efficiency of the analytical methods
- Assign team members daily duties
- Responsible for training and continuing education of team members
- Manages personnel issues in the section, including time sheets, time off requests, schedules, etc.
- Conduct the performance evaluation of team members

2000-2006: **Professional Research Associate/ Toxicologist**. Colorado State University Health Sciences Center, Forensic Toxicology Laboratory

- **Laboratory Manager**: Manage the day to day activity of the Forensic Toxicology laboratory
- Responsible for maintaining the laboratory's accreditation
- Organize the basic research activity in the laboratory
- Responsible for employee training and counseling
- Develop and validate new analytical methods
- Analyze, review and report analytical data
- Consult with law enforcement agencies, pathologists, and veterinarians on toxicology issues
- Provide expert testimony

1991-2000; Analytical Toxicologist: Oklahoma Animal Disease Diagnostic Laboratory, Oklahoma State University

- Analyze biological and environmental samples for drugs, pesticides, heavy metals, mycotoxins, feed additives, petroleum hydrocarbons, water pollutants and etc.
- Used, GC/MS, GC-FID, HPLC, AA, TLC, ELISA and bench chemistry
- Write and review standard operation procedures
- Analyze data, interpret and report results
- Consult with veterinarians and provide diagnostic service
- Perform research to improve and develop analytical methods
- Provide training to residents in analytical toxicology

Awards and Certificates

2007-**Diplomate: American Board of Forensic Toxicology**
1999-**Diplomate: American Board of Veterinary Toxicology**
1990-**Academic Excellence Award;** College of Veterinary Medicine
1981-**Academic Excellence Award**, College of Agriculture

Publications

Fessessework Guale, Shahriar Shahreza, Jeffrey P. Walterscheid, Hsin-Hung Chen, Crystal Arndt, Anna T. Kelly and Ashraf Mozayani: **Validation of LC-TOF-MS screening for drugs, metabolites and collateral compounds in Forensic Toxicology specimens.** Journal of Analytical Toxicology, Vol. 37. No. 1, 2013 pages 17-25.

K. Bischoff, F. Guale; **Australian Tea Tree (*Melaleuca alternifolia*) oil poisoning in three purebred cats**. Journal of Veterinary Diagnostic Investigations, Volume 10, 1998 pages 208-210

Fessessework G. Guale, George E. Burrows: **Evaluation of Chick Embryo Motoneuron Cultures for the Study of Neurotoxicity**. Natural Toxins, Volume 5, Number 3, 1997, pages 115-120

FG. Guale, EL. Stairs, WB. Johnson, WC. Edwards, JC. Haliburton: **Laboratory Diagnosis of Zinc Phosphide Poisoning**. Veterinary and Human Toxicology, Volume 36, No. 6, December 1994, pages 517-519

Fessessework Guale, **Assessment of Rectal Temperature, Pulse, and Respiratory rates in Healthy Pack Donkeys**. Student Scientific Journal, April 1989, College of Veterinary Medicine, Addis Ababa University, Ethiopia

Presentations

- **Applications of Fast GC-MS in the analysis of Opiates**. Poster presented on October 19, 2007 at Society of Forensic Toxicology Continuing Education Workshop, Raleigh-Durham, NC.
- **Clinical or Forensic Case-A Crossroad for Interpretation**: Presented to Toxicology staff, at the Harris County Medical Examiners Office, October 2007, Houston, TX
- **Pharmacokinetics and Interpretation of Cocaine**: Presented to Fellows and Pathology Residents of the Harris County Medical Examiners Office, September 2007, Houston, TX
- **Interpretive DUID**: Presented to Toxicology staff at Harris County Medical Examiners Office, June 2008, Houston, TX
- **Pharmacokinetics and Interpretation of Cocaine**: Presented to Fellows and pathology residents of the Harris County Medical Examiners Office, October 2008, Houston, TX
- **Interpretive DUID Workshop**: Workshop Coordinator, SOFT/AAFS Drugs and Driving Committee Seminar, May 12-13, 2009, Houston, Texas.
- **Pharmacokinetics and Interpretation of Cocaine**: Presented to Fellows and Pathology Residents of the Harris County Medical Examiners Office, December 2009, Houston, TX
- **Phencyclidine (PCP) in fatally injured drivers and DUID arrests in Harris County, Texas.** Presented at the American Academy of Forensic Sciences, annual scientific meeting, February 24, 2010, Seattle, WA.

- **Pharmacokinetics and Interpretation of Cocaine**: Presented to Fellows and Pathology Residents of the Harris County Medical Examiners Office, November 2010, Houston, TX
- **Drug Testing and Interpretation in Postmortem Toxicology:** Presented at Harris County Institute of Forensic Sciences: Topics in Forensic Sciences Conference, April 15, 2011, Houston, TX.
- **Proof of concept for a comprehensive method for rapid drug screening of whole blood with UHPLC accurate-mass TOF LC/MS**. Presented at the SOFT-TIAFT joint meeting on September 25-30, 2011, San Francisco, CA
- **Pharmacokinetics and Interpretation of Cocaine**: Presented to Fellows and Pathology Residents of the Harris County Institute of Forensic Sciences, November 2011, Houston, TX
- **Toxicology result of drivers of fatal motor vehicle accidents in Harris County, TX, 2011**. Presented at the American Academy of Forensic Sciences annual meeting, February 22, 2013, Washington DC.
- **Recent Trends of Designer Drugs in Harris County Texas:** Presented at the American Academy of Forensic Sciences annual meeting. February 21, 2014, Seattle, WA
- **Diclazepam**: **Lorazepam in Disguise**. Presented at the American Academy of Forensic Sciences annual meeting, February 26, 2016, Las Vegas, NV.

EXHIBIT #3

ASCLD/LAB-*International*

STATEMENT OF QUALIFICATIONS

Name	Fessessework Guale	**Date**	10/08/13

Laboratory	Toxicology

Job Title	Toxicology Analytical Operations Manager

Indicate all disciplines in which you do casework:

☐	**Drug Chemistry**	☒	**Toxicology**
☐	**Firearms/Toolmarks**	☐	**Biology**
☐	**Trace Evidence**	☐	**Questioned Documents**
☐	**Latent Prints**	☐	**Crime Scene**
☐	**Digital & Multimedia Evidence**		

List all category(ies) of testing in which you do casework:

Human Performance and Post-Mortem ForensicToxicology

Breath Alcohol Calibration Categories

☐	**Toxicology** - Breath Alcohol Measuring Instruments (The work of the laboratory MUST include calibration certificates- do not check the box if work is limited to breath/alcohol testing)
☐	**Toxicology** - Breath Alcohol Calibration Reference Material

Education: List all higher academic institutions attended (list high school only if no college degree has been attained)

Institution	Dates Attended	Major	Degree Completed
Oklahoma State University	1993-1996	Toxicology	MSc
Addid Ababa University	1985-1990	Veterinary Medicine	DVM
Addis Ababa University	1981-1983	Animal Science	Bsc

Other Training: List continuing education, workshops, in-service and other formal training received. Please include the course title, source and date of the training.

1:SOFT: Society of Forensic Toxicologists Workshop, October 15-19, 2007, Raleigh, NC
2:Interpretive DUID workshop: SOFT/AAFS Drug and Driving and Continuing Education Committee Seminar, May 6-8, 2008, West Palm Beach, FL
3:Opioids and Pain Management: RTI training, on-line course, June 2008, Houston, TX
4: Interpretive DUID workshop: SOFT/AAFS Drug and Driving and Continuing Education Committee Seminar, May 12-13, 2009, Houston TX
5:Traffic Fatality Investigation Seminar, November 2009, Houston, TX
6:ISO/IEC 17025 and Forensic Services Provider Accreditation Wotkshop: May 10-14 2010, Houston, TX
7:Confirmation Bias, Ethics, and Mistake in Forensics: Forensic Ethics Seminar, May 12, 2010, Houston, TX
8. Medicolegal death investigation Seminar, June 15, 2010
9. Alcohol extrapolation and the use of BAC tracker Software, August 19, 2010
10. Southwestern Association of Toxicologists, Fall 2010 meeting, September 16-18, 2010 Houston, TX
11. Scientific sessions at the American Academy of Forensic Sciences, 62nd Annual scientific meeting, February 24-25, 2010 Seattle, WA

12. Scientific sessions at SOFT-TIAFT conference September 21-23, 2011 San Fransisco, CA
13. Scientific sessions at the annual AAFS conference, Washington, DC, February 22-23, 2013

Courtroom Experience: List the discipline/category(ies) of testing in which you have qualified to testify as an expert witness and indicate over what period of time and approximately how many times you have testified in each.

DWI/DUID: 2/2004, 1/2009, 1/2010, 1/2011, 6/2012, 2/2013

Professional Affiliations: List any professional organizations of which you are or have been a member. Indicate any offices or other positions held and the date(s) of these activities.

Southwestern Association of Toxicologists
California Association of Toxicologists
American Board of Veterinary Toxicology

Employment History: List all scientific or technical positions held, particularly those related to forensic science. List current position first. Be sure to indicate employer and give a brief summary of principal duties and tenure in each position.

Job Title	Toxicology Analytical Operations Manager	**Tenure**	present
Employer	HCIFS		
Provide a brief description of principal duties:			
Provide leadership in the analytical operations of the toxicology laboratory, Responsible for the day to day activity of analysts and the work flow of cases			

Job Title	Assistant Chief Toxicologist	**Tenure**	2 years
Employer	HCIFS		
Provide a brief description of principal duties:			
Assist the Chief Toxicologist in the management of the laboratory			

Job Title	Toxicologist I	**Tenure**	2 years
Employer	HCIFS		
Provide a brief description of principal duties:			
Supervise the different sections of the toxicology laboratory			

Job Title	Toxicologist II Specialist	**Tenure**	2 years
Employer	HCIFS		
Provide a brief description of principal duties:			
GC/MS section team leader, perform data analysis, data review, technical and administrative review of cases			

Job Title	Research Associate	**Tenure**	5.7
Employer	University of Colorado Health Sciences Center		
Provide a brief description of principal duties:			
Assist the lead investigator in basic research, manage the day to day activity of the forensic toxicology laboratory			

Other Qualifications: List below any scientific publication and/or presentation you have authored or co-authored, research in which you are or have been involved, academic or other teaching positions you have held, and any other information which you consider relevant to your qualification as a forensic scientist.
(Use additional sheets if necessary.)

PRESENTATIONS:

1.Toxicology Result of Drivers of Fatal Motor Vehicle Accidents in Harris County, Texas in 2011: AAFS Annual conference, washington, DC, February 22, 2013
2. Proof of concept for a comprehensive method for rapid drug screening of whole blood with UHPLC Accurate-mass TOF LC/MS, presented at the SOFT-TIAFT confernce on september 23, 2011, San

fransisco, CA.
3: Interpretation and Pharmacokinetics of Cocain: Presented to Pathology Fellows of HCIFS. December 2010
4: Phencyclidine (PCP) in Fataly Injured Drivers and DUID Arrests in Harris County, Texas : presented at the American Academy of Forensic Sciences, 62nd Annual Scientific Meeting, February 24, 2010, Seattle, WA
5: Interpretation and Pharmacokinetics of Cocaine: Presented to Pathology Fellows and Toxicology Staff of HCIFS, December 2009, Houston TX
6: Interpretive DUID: Presented to Toxicology Staff of HCIFS, July 2008, Houston, TX
7: Poster presentation on Fast opiate analysis by GC/MS, SOFT, October 15-19, 2007. Raleigh, NC
8: Clinical or Forensic Case: A Cross road to Interpretation: Presented to Toxicology Staff of HCIFS, November 2007, Houston, TX
9: Prevalence of Drugs of Abuse from DUID cases in Denver Colorado, 2003-2005. Presented to Toxicology Staff on May 8, 2006 at HCIFS.

PUBLICATIONS:

1. Validation of LC-TOF-MS screening for drugs, metabolites and collateral compounds in Forensic Toxicology specimens: Journal of Analytica Toxicology, Volume 37, number 1, 2013, pages 17-24
2: Australian tea tree oil poisoning in three purebred cats. Journal of Veterinary Diagnostic Investigation. Volume 10, 1998, pages 208-210
3: Evaluation of Chick Embryo Motoneuron Cultures for the study of Neurotoxicity. Natural toxins, Volume 5, number 3, 1997 pages 115-120
4: Laboratory Diagnosis of Zinc Phosphide Poisoning. Veterinary and Human Toxicology. Volume 36, number 6, 1994, pages 517-519

CERTIFICATES:
1: Diplomat:American Board of Veterinary Toxicology
2: Forensic Toxicology Specialist : ABFT

REPORTER'S RECORD

TRIAL COURT CAUSE NO. 1996292

THE STATE OF TEXAS	*	IN THE COUNTY CRIMINAL
	*	
VS.	*	COURT AT LAW NUMBER 13
	*	
EDWIN GADDIS	*	OF HARRIS COUNTY, TEXAS

****

GUILT/INNOCENCE PHASE

(TESTIMONY OF DR. FESSESSEWORK GUALE)

****

On the 29th day of January, 2016, the following proceedings came on to be heard in the above-entitled and numbered cause before the Honorable Henry Oncken, Judge presiding, held in Houston, Harris County, Texas:

Proceedings reported by machine shorthand.

A P P E A R A N C E S

MS. ANDREA P. BEALL
Assistant District Attorney
SBOT No. 24086195
1201 Franklin
Houston, Texas 77002
(713) 274-0500
ATTORNEY FOR THE STATE OF TEXAS

MS. MARITZA SHARMA
Assistant District Attorney
SBOT No. 24075493
1201 Franklin
Houston, Texas 77002
(713) 274-0500
ATTORNEY FOR THE STATE OF TEXAS

MR. JAMES R. FLETCHER
Tyler Flood & Associates, Inc.
SBOT No. 24077619
1229 Heights Blvd
Houston, Texas 77008
(713) 224-5529
ATTORNEY FOR THE DEFENDANT

ALSO PRESENT:

Ms. Laura Flores, Paralegal
Tyler Flood & Associates, Inc.

January 29, 2016

(Jury present)

DR. FESSESSEWORK GUALE,

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MS. BEALL:

Q Would you state and spell your name for the record.

A My name is Fessessework Guale, F-E-S-S-E-S-S-E-W-O-R-K G-U-A-L-E.

Q And what do you do for a living?

A I'm hired by the Harris County Institute of Forensic Sciences. I work as an analytical operations manager in the toxicology laboratory.

Q What is your educational background that qualifies you to hold that position?

A I have a degree of the Doctor of Veterinary Medicine. I also have a Master's Degree in Toxicology. I am double board certified: One by the American Board of Veterinary Toxicology and another one by the American Board of Forensic Toxicology.

Q What type of -- well, how long have you worked with IFS?

A Nine years.

Q And during those nine years, what have your

duties been?

A Before I become a manager, I was a team leader in one of the sections. We have three sections in the lab; that is, gas chromatography section, liquid chromatography section, and screening and alcohol section. So I was organizer of all the section and as a lead in one section and I was also -- I get promoted to Toxicologist I -- Forensic Toxicologist I to be a manager to supervise the whole laboratory personnel and supervise the workflow of the lab.

And now I am the analytical operations manager in that whole -- I oversee the whole laboratory operations, the analytical operations from receiving the samples up to the end of the report; and I make sure all the cases that we receive, the samples we receive, take the proper rotation and follow the standard operation procedures. And then I -- when I believe it's the right result, I will sign them out.

Q Are you a member of any professional organizations?

A Yes.

Q What are those organizations?

A American Academy of Forensic Sciences, Southwestern Association of Toxicologists, California Association of Toxicologists, American Board of

Veterinary Toxicology.

Q What education and training have you had specifically in the area of -- the effect of drugs on the human body?

A When you do Master's in Toxicology, that's what you study. You would have an extensive study of drugs and other chemicals and other toxins and poisons and how they interact in the environment and how they interact once you introduce them in your body, what the body does to them and what happens -- you know, what is the effect of the drug and how they are expressed out, behaviorally, physiologically.

So those are extensive studies. And in the course of your studying, you know, to pass the board exam, you review a lot of literatures, research articles; and you update yourself with those every day. You read every day, and then you pass your board. And then after that, in the workforce, you go to conferences, present papers, you publish papers; so you are always continuously studying about the drug effects and what they do to you.

Q Have you yourself published papers?

A Yes.

Q And what papers are those?

A Just recently I had published analytical paper

using the state of the art instrument, which we call time-of-flight instrument; and I use that instrument to screen for the recently, you know, designer drugs that our young people are dying off. So we have that instrument and we are the first laboratory to do that and I published that. That was my recent publication. I have others.

Q Are you familiar through your education, experience, and training with the substances methamphetamine and amphetamine?

A Yes.

Q Can you educate us on methamphetamine and what it is?

A Methamphetamine is a very dangerous drug. It's a controlled substance, and you should never use it. It's a schedule II controlled substance; and the reason that nobody should use that is because it's addictive, it's dangerous, not only to yourself and also to the community, and the people that you are living with. And once you are hooked up, you become addicted to it. It's very hard to come off of it, so it's very dangerous.

What it does is it's a central nervous system stimulant. So in very low doses, you know, you get high, you get excited. That's the exhilaration

that, you know, the young people are -- and the adult people want to have in the beginning.

Then the more you use it, the more you start to get addicted; and then you start using more. Then you end up having a behavior that hurts yourself and other people, you know. You get into very abusive behaviors, get into hallucinations, violent behaviors; and you become a risk taker while you are driving.

So, you know, you feel like you are the only person in the world and nobody exists, so you can do whatever you want. You know, it gives you the courage and the energy to do whatever you want.

So it's really, really very dangerous and you can also die of it with overdose because it affects your central nervous system. It also affects your cardiovascular system; so you can die of a heart attack, you can die of excited delirium where, you know, you don't know where you are, you don't know what you do, you hallucinate, and you become out of your body.

It's a very dangerous drug. In a very small doses, it can be used -- there's a prescription that's a very, very small dose for narcolepsy where people are frequently sleeping; so they can take that medication, but that's a prescription drug. It's very

small dose, just for that purpose.

There's also a prescription for ADD, or attention-deficit disorder. People can take that with prescription. That's also a very small dose, which does not give you addiction behavior.

Q Let me ask you about those types of methamphetamine. There are -- there's a l-methamphetamine and a d-methamphetamine, correct?

A Yes.

Q What is l-methamphetamine?

A As in the chemistry of it, "l" and "d" stands for levorotatory or dextrorotatory. That means these are isomers. These are the same compounds but the chemistry formula is different. You know, the hydrogen is attached, the atom is attached this way or that way. This is the same molecule; but, functionally, because they are, you know, structurally different, the "l" one can be used without stimulating your brain.

Like, for instance, we have the Vicks inhaler that will have the l-methamphetamine in it that's been used for decongestant purposes. It doesn't go to your central because it's "l." But the dangerous one is a "d" one; that's the one that affects your central nervous system.

Q So is the d-methamphetamine the illegal

version of methamphetamine?

A Yes.

Q Now, you are aware that -- are you aware that your laboratory produced a lab in this case?

A Laboratory, yes.

Q A lab report?

A Yes.

Q And is that what we see here in State's Exhibit 14?

A Yes.

Q Is that your name in the bottom right-hand corner?

A Yes.

Q Now, why did you sign off on this lab report?

A I am the expert on this cases and I have to look at it; and I have to see whether, you know, the whole case is done properly and I have to sign it out. It's in our standard operation procedures, an expert has to look at the report and make sure the case is done properly; and then I sign it out.

Q Looking at this lab report, what is -- what are the levels of methamphetamine and amphetamine in the defendant's blood?

A The amphetamine is less than .10 milligram per liter. In other words, .10 means 100 nanograms; and

methamphetamine is also listed as .10 milligram per liter, which is less than 100 nanograms of the blood in the sample.

Q Is it possible that the methamphetamine on this lab report is the l-meth, or the legal meth?

A It is possible because we don't have a matter to differentiate between the two.

Q How do we know that this is not the l-meth?

A Usually, when the -- when there's -- when it's not the l-meth, you find both of them in there.

When it is the l-methamphetamine by itself, there is a chance that you may not see the amphetamine in there.

Q Why is amphetamine important?

A Because it's a metabolite. You have to see both. It's -- when you see both drugs in the same blood sample, that means it comes from the d-methamphetamine. In most cases.

And the reason is, when it is an l-methamphetamine, the ones that are being used in -- as a decongestant, you would not see this level in the blood. So most definitely when you see two of the parent and the metabolite, that means it comes from the "d."

Q Okay. So we know that this is -- am I

understanding you correctly in that this is the d-methamphetamine because the metabolite is there?

A Yes, unless this is something prescribed for narcolepsy or for ADD.

Q Okay.

A Unless those two are there, yes, this is definitely from the "d."

Q And in terms of ADD, which of these two substances is used to treat ADD?

A Actually, the ADD is only the amphetamine, the Adderall.

Q Okay. So would we see the methamphetamine if this were the product of ADD medication?

A No, you would not see the methamphetamine.

Q And would we see the amphetamine if this were the product of narcolepsy medication?

A Yes.

Q Okay. Would we see -- well, did you have a chance to review the video in this case?

A Yes.

Q And while reviewing the video, did you see any behavior of the defendant consistent with somebody with these levels of methamphetamine?

MR. FLETCHER: Object to leading, Your Honor.

THE COURT: Overruled.

THE WITNESS: Can I go ahead?

MS. BEALL: Yes.

A Yes, there are some symptoms that are associated with this level of the drug, which I see is complete fatigue of the person because these are low levels. It indicates that the person was at the crashing stage. That means where the drug is going out, so the body is yearning or wanting more; otherwise, it's going down. So we call it, you know, high when you have euphoric state as soon as you get the drug and the drug is affecting your brain, gets you excited; but as time progresses, it goes down, down, down and then you become really, really more fatigued because that drug that gives you the energy is not in you, so you get really fatigued.

So the level indicates to me that this is at the end of the drug and the symptom matches with this level.

Q (By Ms. Beall) And what symptoms did you specifically see in the defendant's behavior?

A He was a little bit agitated and he was also -- was not performing on the walk and turn properly. He was not holding his head properly. He was really fatigued. His talk, the way he talk is

another one. His actions and -- you know, repetitive. Doing something repetitive in your hand is another thing. That's, you know, out of consciousness. Subconsciously you are doing something that -- because your body is -- your body is missing something that it's used to.

Q And are you familiar with the term "tweaking"?

A Yes.

Q What does that term mean?

A Tweaking is the -- it's just a nervous effect where this is one of the symptoms of using this drugs, is tweaking; so, yes, there was a little -- not exaggerated, but there was a little tweaking there.

Q That you observed in the defendant?

A Yes, uh-huh.

Q Is there any such thing as just a little bit of meth to where it doesn't affect your mental and physical faculties?

A Well, it's my professional opinion if there is meth, it is affecting your mental and physical faculties, no matter what concentration it is.

Q Is there any such thing as a therapeutic amount of methamphetamine?

A Yes. The therapeutic amount is as long as it's under that prescription; and then there is a

therapeutic amount that you can obtain if you got that prescription to counteract a natural condition, like the narcolepsy or ADD. There is a therapeutic level, yes.

Q How do we know that this is not just a therapeutic level?

A It crosses in there. It crosses in the therapeutic level.

Q Okay. And what you observed in the defendant and what you know of the amount of methamphetamine and amphetamine present in this lab, do you believe that he was just using a therapeutic amount of methamphetamine?

A I -- because this is a low level of methamphetamine and because of what I saw, I -- I hardly believe this is a prescription. I cannot believe this is a prescription. If it is a prescription, he should not be behaving that way because that behavior is coming -- comes from repeated use of this drug. Usually the prescription should not last long time. So the behavior that I see does not come from a prescription.

Q So in your professional opinion, was this the street meth, the illegal meth that we know about?

A Yes.

MS. BEALL: Pass the witness.

THE COURT: Mr. Fletcher.

MR. FLETCHER: Thank you, Your Honor.

CROSS-EXAMINATION

BY MR. FLETCHER:

Q Dr. Guale, the standards have to be within an acceptable range in the raw data, correct?

A You mean -- what standards?

Q The standards have to be -- when you are doing a GC/MS, they have to be within the acceptable range in the raw data, correct?

A Yes.

Q Okay. And if they are not in the acceptable range, then that would be a problem, right?

A Yes.

Q Okay. You testified earlier that when -- some of the common signs of a person being intoxicated off methamphetamine, they would be -- you would expect to see violent behavior; is that correct?

A At the time, yes, depending on the stage where he was.

Q You testified that you would expect to see a person that's intoxicated on meth have a lot of energy, have high energy?

A Yes.

Q Okay. And you testified that you would expect

to see someone who is very excited?

A Yes.

Q And they might even be in delirium?

A Yes.

Q And you also testified that a person intoxicated on meth could have hallucinations?

A Yes.

Q Correct me if I'm wrong, but I heard you say that the "d" version of methamphetamine has been used to treat narcolepsy before?

A Yes.

Q Okay. And that's a prescription that a doctor can give to treat narcolepsy includes d-meth, right?

A Yes.

Q And you have no testimony today whether or not Mr. Gaddis has a prescription for any narcolepsy, right?

A No.

Q You don't know, right?

A I don't know.

Q Amphetamine, like we see on the lab result here, does not necessarily have to be a metabolite of methamphetamine, correct?

A There are others like the Adderall.

Q Right. You can see -- well, I'll put it this

way: Amphetamine is a common ingredient in many prescription medications, right?

A There are very few that we know.

Q Well, there are prescription medications that contain amphetamine; and they are pretty common, right?

A They are not common.

Q For ADD, it's pretty common, right?

A For ADD, yes.

Q So you don't know whether or not Mr. Gaddis has a diagnosis and prescription for ADD?

A No, I don't.

Q So it's entirely possible that the result of amphetamine that we see up there could have been a result of an ADD prescription and not necessarily a metabolite of methamphetamine, correct?

A But the fact that methamphetamine is there --

MR. FLETCHER: Object to nonresponsive, Your Honor.

THE COURT: Just listen to the question, and answer the question that he asks you.

Q (By Mr. Fletcher) It's possible, right?

A Amphetamine is, yes.

Q Now, isn't it possible, Dr. Guale, that a person could have a prescription drug containing methamphetamine and be using over-the-counter

medications containing methamphetamine and have the lab results that we see here?

A You mean, both --

Q Yes.

A -- used? Sure.

Q Right. So it's entirely possible that Mr. Gaddis was using a product containing l-methamphetamine and a prescription containing amphetamine and we would see lab results like what we are looking at here, right?

A Correct.

Q And you don't have any testimony that that -- that he is not doing that, correct?

A No.

Q In fact, your lab cannot determine the difference between l-meth and d-meth without a chiral column, right?

A Correct.

Q And you do not -- your lab does not have a chiral column?

A No.

Q Okay. And the levels that we see here, all we know is that they are below the lowest calibration curve -- the lowest point on your calibration curve, right?

A Yes.

Q You can't tell the jury a specific level of either of those drugs, correct?

A No.

Q You can just say, well, he's got less than this and that's all we know, right?

A Yes.

Q Okay. Now, Dr. Guale, I'm going to point your attention -- direct your attention to the lab result. There was no pseudoephedrine detected in this sample, correct?

A No.

Q Okay. And isn't it true, Dr. Guale, that one of the most common ingredients in the illegal form of methamphetamine is pseudoephedrine?

A Say that again.

Q Isn't it true that one of the basic ingredients for illegal methamphetamine is pseudoephedrine?

A They make methamphetamine out of it, but we don't see it.

MR. FLETCHER: Nonresponsive, Your Honor.

Q (By Mr. Fletcher) Isn't it correct that pseudoephedrine is commonly used to make methamphetamine?

A It's used, yes.

Q Okay. But no pseudoephedrine in this lab result, right?

A No.

Q You testified that you watched the video and you observed Mr. Gaddis to be fatigued, right?

A Yes.

Q I assume you watched the video where he tells the police that he had just finished -- or that he had worked from 6:00 until 7:00 that night, correct?

A Correct.

Q Right. So it's entirely possible that the fatigue exhibited by Mr. Gaddis on the video was caused by him working a 12-hour shift, right?

A Could be.

Q Okay. And you testified earlier that any amount of methamphetamine causes intoxication. Did I hear that correctly?

A It can affect your mental and physical faculties.

Q Okay. It can.

A Uh-huh.

Q Okay. And I also heard you testify that this is a very low level of both of the -- both of the active metabolites that we see here, right?

A Yes.

Q Okay. And just to reiterate, Dr. Guale, the methamphetamine that we see here could possibly be the l-methamphetamine variety, right?

MS. BEALL: Objection, asked and answered.

THE COURT: That's overruled.

A The l-methamphetamine --

MR. FLETCHER: Nonresponsive, Your Honor.

Q (By Mr. Fletcher) Just "yes" or "no"?

A There is no "yes" or "no" answer for this.

Q Isn't it possible it can be l-methamphetamine?

A No.

Q It's not possible?

A The l-methamphetamine that we do -- you do use on the Desoxyn is not absorbent enough into your system --

MR. FLETCHER: Object to nonresponsive, Your Honor.

Q (By Mr. Fletcher) You can't tell us what the level was based off these lab results, right?

A No.

Q Okay.

MR. FLETCHER: Pass the witness, Judge.

THE COURT: Anything from --

MS. BEALL: Redirect?

THE COURT: Yes.

REDIRECT EXAMINATION

BY MS. BEALL:

Q Why isn't it possible that this would be l-methamphetamine?

A Because the l-methamphetamines that are out there as a decongestant are locally applied in your nose; so mostly, they do not come into your system to be identified that much, even at the lower level.

Q So if this were methamphetamine -- or l-methamphetamine, would it even register on your lab's equipment?

A By itself, yeah, it would show as a methamphetamine. There's no differentiation between the two. I'm talking about the possibility of using the decongestant to show up as a methamphetamine because we cannot, you know, differentiate between the two. But the question is: Does a person can take both "l" and d-methamphetamine and it would show like this? Yes, both of them.

Q Okay. So how do you know that this is d-methamphetamine? Looking at this lab report, how do you know that the defendant's blood had the illegal form of methamphetamine?

MR. FLETCHER: Objection, Your Honor. This is speculation, and it's been asked and answered.

THE COURT: Overruled.

A Usually, when you are abusing drug, you can have both mixed or pure or by itself. There are three ways to get it. Okay? Some is mixed, "l" and "d" mixed, and some "d" by itself, which mostly that you get --

MR. FLETCHER: Objection to nonresponsive, Your Honor.

THE COURT: Overruled.

Q (By Ms. Beall) You can continue.

A Okay. So you get the "d" by itself, you get the "d" and the "l" together, and you got only "l." So the only "l" is the Desoxyn, or the decongestants. You get only "l" form because you don't want them to go to your brain. There are "d" and "l" combinations where, you know, the prescription medication can be a "d" and "l" together, like the Desoxyn for the narcolepsy; it may have both.

There are also -- the obesity medications that you take for obesity that has both of them in there. So for both, we cannot differentiate. If the person takes the abuse and the obesity, we can't; but if it is only "l," it would not show up. And only "l"

would not show up this much. That's what my argument is.

Q Okay. So this is not an inhalant, is that what you are saying?

A Yes, this does not come from an inhalant. That's what I'm talking about, or this is not "l" only.

Q Why doesn't pseudoephedrine show up in positive results from methamphetamine?

A Because the ephedrine is what the methamphetamine come out of. It's changed to make methamphetamine, so you don't see it. It's the base compound where the user pseudoephedrine and change it to methamphetamine. So there is no pseudoephedrine.

Q Based on what you see in the video and what you viewed in this lab report, why is it that you don't believe this is just legal narcolepsy medication?

MR. FLETCHER: Asked and answered, Your Honor. Objection.

THE COURT: I'll allow her to answer it.

A The reason is if it is a narcolepsy medication, it should be a low level, which this could be a low level but the person would not have that kind of side effect. Narcolepsy is people who constantly sleeping. So to make them alert is what the medication is given to them. They should be alert and they should

be working normal but what I see here is a person who has been abusing the drug and at the end --

MR. FLETCHER: Objection to speculation, Your Honor.

THE COURT: Overruled.

Q (By Ms. Beall) A person who has been abusing and...

A A person who is habitually doing it and then there's a high time, there's also a low time; but what I see in that person is at a crash phase, what happens at the crash phase, when you crash or the medication is weaning out of your body. That's what I see here.

Q So in this lab report, do we see the current processing of methamphetamine in the body?

A Yes, it's being metabolized.

MS. BEALL: Pass witness.

RECROSS-EXAMINATION

BY MR. FLETCHER:

Q So, Dr. Guale, you don't know anything about Mr. Gaddis' medical history, correct?

A No.

Q You don't know anything about his prescription history, correct?

A No.

Q And you don't know anything about his family

history or anything like that, right?

A No.

Q Okay. Do you have any testimony that he abuses methamphetamine, personally? Do you know of anything that he does that?

A No.

Q No. Okay.

MR. FLETCHER: Pass the witness, Your Honor.

* * * * *

STATE OF TEXAS

COUNTY OF HARRIS

I, Deanne Bridwell, Official Court Reporter in and for County Criminal Court at Law No. 13 of Harris County, Texas, do hereby certify that the above and foregoing pages contains a true and correct transcription of all portions of evidence and other proceedings requested in writing by counsel for the parties to be included in this volume of the Reporter's Record, in the above-styled and numbered cause, all of which occurred in open court or in chambers and were reported by me.

I further certify that this Reporter's Record of the proceedings truly and correctly reflects the exhibits, if any, admitted by the respective parties and requested to be made a part of this record.

WITNESS MY SIGNATURE on this, the 12th day of February, 2016.

/s/Deanne Bridwell
Deanne Bridwell, Texas CSR, RPR
Expiration Date: 12/31/16
Official Court Reporter
County Criminal Court at Law No. 13
Harris County, Texas
1201 Franklin
Houston, Texas 77002
(713) 755-2376

happens is the instrument will just -- this is raw data. And so, basically, this value of .027 on this chromatogram is based on the last calibration. So, as you can imagine, different analysts are running our calibration -- it varies from analyst to analyst, but our acceptability, our 5-percent rule takes that into consideration.

So, on this run, this is the raw data. This is not the actual value associated with this standard on this curve. Because if you look at the top under -- next to "last calibrated," it has a date of Monday, December 22nd at 8:01. If you were to pull up the actual chromatogram of the sample that was run on that day, the date that it was last calibrated is the actual curve associated with that sample, if that makes sense.

Q. (BY MR. FLOOD) And that's what that refers to, because this says, it was acquired at 7:56 on December 22. And so, it's the same calibration from the day same, right, it's the same day that we're talking about?

A. This was run on this day --

Q. Okay.

A. -- but this is the raw data.

Q. Okay. Well -- so, the data says the

acceptable range of the 025. The 025 standard -- you put in standards to make sure that it's calibrated, and it's able to read what it's supposed to be reading within the acceptable ranges, correct?

A. Yes.

Q. Okay. And you said this is important, because if they're outside of the ranges, you wouldn't report it, correct?

A. If my curve -- if this was my final result -- if this was my raw result from my curve, technically, the .027 is within the range. But I do know that the raw data is not -- it doesn't always work like that. So, when it says "Date acquired: 12/22/2014," right here with the "7:56." Essentially, what happens is the instrument injected the .025 standard, and then it created a calibration at 8:01, which is when the chromatogram printed out.

Our calibration curve is -- the actual calibration is a result of all six calibrators. So, all six calibrators hadn't been injected yet, which is why this result is the raw data, and we don't use this for our reporting criteria.

In the discovery that I did provide to Mr. Flood, there is the actual data, with the actual result that is used for the curve and for the

samples.

THE COURT: Which represented all six injectors, I think you called them?

THE WITNESS: Yes. And it will have the proper calibration date on it, which will match the calibration date on the sample of the result that I did report.

THE COURT: "That you did report," you said? Or you said, "didn't"?

THE WITNESS: That I will use to determine the lower of the 5 percent.

THE COURT: Okay.

MR. FLOOD: May I continue?

THE COURT: Sure.

Q. (BY MR. FLOOD) Okay. So that was Defense No. 4. These are -- when you do the calibration, it produces a chromatogram like this, right? It will make a line, but a calibration is introducing a standard -- different standards, how many points are you using, five or six?

A. Six.

Q. Six points. Okay. And it produces a chromatogram for each one of those standards, you know, on a stairstep going up, right -- that's bad language. But you used different known standards to

calibrate the machine, right?

A. Yes.

Q. Okay. So, here's -- we have the .025. All -- it was just saying, this one shows it was a .027. And here's (indicating) what was entered as the acceptable range and it's within that acceptable range, right?

A. Yes. But this is the raw data that's not used for the calibration.

THE COURT: I think we're okay. I think we're okay.

Q. (BY MR. FLOOD) Okay. This is Defense Exhibit No. 5. Okay. Again, from the same batch of the samples that you reported, correct?

A. Yes.

Q. And this is the 05 quality control standard, right?

A. Yes.

Q. Okay. And the acceptable range is 047 to 052, right?

A. Yes.

Q. And the raw data shows it was 052, right?

A. Yes.

Q. So, at the very top. It's still within the range, right? So, when you get into the higher

calibrator, this is Defense Exhibit 6. Okay. And this would be .10 standard quality control from the 12/22 batch run, right?

A. Raw data, yes.

Q. Right. Well, I mean, this is what we asked for in discovery, and this is what the lab gave us, correct?

A. Yes.

Q. Okay. So, the acceptable range here is 095 to a 105, correct?

A. Yes.

Q. So, this is above the range of the number you reported, right -- I'm sorry -- this is below the range of the number that was reported?

A. For the value of the ethanol that I found in the tube, yes.

Q. Okay. So, this one we have a problem with because the raw data is a .108, which makes it outside of the range; is that correct, yes or no?

A. No, it's not a problem.

Q. No, I didn't ask you that. I said, is the .108 that was reported on the chromatogram in this raw data, is that inside or outside the acceptable range?

A. Outside.

Q. Okay. And this is Defense Exhibit No. 7. Okay. And so, now we have the .20 standard from the same batch on 12/22/2014, right?

A. Yes.

Q. And so, this is above the number that you had reported in this case, correct?

A. Yes.

Q. Okay. So, this is in the area of concern of this number, because the number you reported was between that 10 and between the 20, correct?

THE COURT: I got that. Go on. Come on.

A. What is the question?

THE COURT: I got it. Don't worry about it.

Q. *(BY MR. FLOOD)* So, the 0.190 to the .210 is the acceptable range, right?

A. Yes.

Q. And so, this one was a .216, this is outside of this range, correct?

A. Yes.

Q. And then this is Defense Exhibit No. 8, .30 standard quality control from this batch to Mr. Imrecke's sample, right?

A. Yes.

Q. And the acceptable range is .285 to .315, right?
A. Yes.
Q. And the ethanol was a .323 which was -- is that inside or outside of the range?
A. Outside.
Q. Okay. So you -- so, the first one you had was 12/17. The first sample was on 12/17, the second one was Monday 12/22, right?
A. Yes.
Q. And -- I'm sorry, those weren't within; the 5 percent?
A. No, they were not within 5 percent of one another.
Q. Okay. So, then, you ran it again to try to make it within 5 percent, correct?
A. I ran it again because that's our standard operating procedure.
Q. Right. Because you knew that there were issues, it wasn't complying with the lab's requirements, right?
A. It was outside of the 5 percent, yes.
Q. Okay. So, then, you ran it again on 12/24 --
A. Yes.

Q. -- is that right? Okay. And I have that. But -- what was that result?
A. It was 0.136.
Q. Okay. I'm sorry. The 12/22, the ones that we just went over are the ones that were outside of the range. And that was a .139, correct?
A. Yes.
Q. And the ones that were out of tolerance, so you ran it again. And the second time -- or the third time was on December 24th, and it was a 136?
A. Yes.
Q. Okay. So, that's the one that you reported, right?
A. Yes.
Q. Okay. So, from the December 17th results of a .128 the 12/24th of the 136 -- you have a calculator on you?
A. No.
Q. Is that within 5 percent?
A. No.
Q. It's not. Okay.
MR. FLOOD: Judge, I'm just going to write this down, just the three dates, if that's okay?
THE COURT: Okay. Quickly.

Q. (BY MR. FLOOD) So, 12/17 that was a .128, correct?
A. Yes.
Q. And there was nothing wrong with that one, right?
A. Nothing wrong with?
Q. You didn't have any quality controls that were out of tolerance, did you?
A. No.
Q. Okay. And then the 12/22, you had a .139, right?
A. Yes.
Q. Okay. But there was no 5-percent agreement, right?
A. Yes.
Q. Okay. So, then, on 12/24 you ran it again, and you got a .136, right?
A. Yes.
Q. So, this one was not only within 5 percent of this one, but this one also had three quality controls that were out of tolerance, correct?
A. No.
Q. Out of range?
A. No.
Q. Okay. Well, you're not denying what I just

showed you and what it says on the paperwork, right?
A. That's the raw data. That's not what's used to determine the results.
Q. Okay. And you didn't, in fact, report that one. So, you reported this one. And this one is not within 5 percent of this one either, correct?
A. Correct.
MR. FLOOD: Okay. I'll pass the witness.
MS. WILLIAMS: A few questions, Your Honor.
Can I turn his board so I can look at it?
THE COURT: Okay.
MS. WILLIAMS: Thank you, Your Honor. Do you mind if I use this?
MR. FLOOD: Don't mark on it.
MS. WILLIAMS: Oh, no, I won't write on it, no problem.
MR. FLOOD: I mean, you can use my paper, that's fine.
MS. WILLIAMS: Okay.
MR. FLOOD: May I mark this, just for preservation purposes?
THE COURT: Yes.

MR. FLOOD: Defense Exhibit 11, for demonstrative purposes.

THE COURT: Okay. It's admitted. I'm sure there's no objection, since she's using it.

Right?

MS. WILLIAMS: Yes, Your Honor, no objection.

THE COURT: Okay.

VOIR DIRE EXAMINATION

BY MS. WILLIAMS:

Q. Just so we can clarify the runs on 12/17, what tube was that?

A. Tube A.

Q. Tube A. And then the run on December 22nd, what tube was that?

A. Tube B.

Q. And the run on December 24th, what tube was that?

A. Tube A.

Q. Just to clarify, so when you ran Tube A the first time, and then ran Tube B the first time, what happened? Were you able to report those results?

A. No, I was -- because they're outside of the 5 percent, I did have to -- our standard operating procedure requires that I take the value, the lowest,

the tube associated with the lowest value and repeat that tube. So, I had to repeat Tube A.

Q. The tube associated with the lowest value. So, you repeated Tube A?

A. Yes.

Q. So, when you got a .139 and .136, were you by protocol and procedure allowed to report the .128?

A. No.

Q. And why was a that?

A. I couldn't report the .128, because our standard operating procedure requires that we have two values within 5 percent of one another. If the .128 and the .136 were within 5 percent of one another, then I would have reported the .128 value.

Q. Okay. And what about the fact that this .128 and this .136 was on the same tube, and you're comparing -- you want to compare Tube A and Tube B?

A. That's -- it just -- it doesn't necessarily matter. I would've -- even if I had -- Tube B had two lower values, it would still be okay with me to report Tube B, based on our standard operating procedure. Although, we are comparing A and B.

Q. Okay. And so, you followed your -- so, did you follow your procedure and your protocol?

A. Yes.

Q. And so --

MS. WILLIAMS: A few other questions, Your Honor. If I may publish the Defense Exhibits?

THE COURT: Yes.

Q. *(BY MS. WILLIAMS)* I want to take us through them each, one-by-one, but it seemed like you had something you wanted to explain. Is this raw data explanations to the various exhibits, are those relevant to the results that you reported?

A. No.

Q. And why are they not relevant?

A. Well, the raw data is just -- well, this is actually one of the results so that, in particular, is important. But the actual standards are -- basically, from day-to-day, we have to recalibrate the instrument, because it's based on my -- I mean, I calibrated the instrument based on my ability to pipette the correct amount into the tube.

And so, what I was trying to explain earlier, is that when it says "last calibrated," if you look at the -- it doesn't calibrate the instrument until the last standard runs, which is the .4 standard. And so, once that standard prints out, then the instrument is calibrated for the day. And then, it will reprint the correct values for the

.025, the .05, the .1, and everything; so, that data is not consistent with this raw data.

And I'm not -- I don't think I'm explaining it the best way; so, if you have questions, to maybe lead me in the correct direction.

Q. Okay. So, it sounds as if you're saying -- so you mentioned earlier, that all of the calibrators had not been properly injected at this point; is that correct?

A. They hadn't been injected yet.

Q. At the raw data standards?

A. Yes.

Q. So, at this point, it's not completely calibrated, is that a correct interpretation, or am I misconstruing it?

A. Yes. The calibration is complete; once all six standards have been injected because the calibration is based on all six standards.

Q. Okay.

MS. WILLIAMS: And just to clarify, Your Honor, I was referencing the defense exhibits regarding the standards. So, that would be Defense Exhibit No. 8, Defense Exhibit No. 7, Defense Exhibit No. 4, Defense Exhibit No. 6, Defense Exhibit No. 5.

Q. *(BY MS. WILLIAMS)* Okay. So, ultimately, I

just need you to explain in the simplest manner, why the number that you reported is accurate, and you're able to testify to that fact.

A. So the number that I reported is accurate, because I followed all the standard operating procedures. The instrument was working properly; I had no issues. The maintenance was performed, the calibration was acceptable, and all of the quality controls bracketing all my data fell within range. So, based on that information, I was able to provide a result that I believe is accurate and reliable.

THE COURT: Can I ask a question here?

MR. FLOOD: Yes.

MS. WILLIAMS: Yes, Your Honor.

THE COURT: Thank you.

So then I flat -- don't understand. Because we just saw three of your test runs -- I guess you could call them -- that weren't within the range of tolerance that is supposed be acceptable. And if I'm using incorrect words, forgive me. And, yet, you just said that they are within range. I don't understand.

THE WITNESS: I was saying that the quality controls are -- you're saying the actual values of the results of tubes for the case or are

you saying --

THE COURT: No. No, no, no, of the calibration runs.

THE WITNESS: Okay.

THE COURT: So, if you do these calibration runs -- is that okay to say that?

THE WITNESS: Yes.

THE COURT: -- and they come out wrong, outside the range of tolerance for that. How does that mean that it is running properly, then?

THE WITNESS: I guess, one of the ways that I think of it is -- so, I guess -- I'm trying to think of an example. It's almost like you can't trust the value of -- like, for example, the .025 standard printed off first, but that .025 standard, the value of that is not taking into consideration all of my other values because they haven't run yet. So, that's why I said that the calibration -- the values of the standard for the calibration curve aren't -- they're not printed. And -- I mean, they're printed, but that's the raw data. It's not the actual useable data until we include all of the standards --

THE COURT: Why?

THE WITNESS: -- to determine the

result.

Because that -- because the calibration is -- as the instrument is running, it's taking that value and recalibrating, essentially. So, it has six standards; it takes the first standard and injects it, and that's the only standard it's using to base that value onto it. But since we're using six, we have a wide range of acceptability we want. We want to be able to produce a reliable result from .025 all the way to .42. So, in order to do that, we can't just use one standard to generate a great result, right, you need all six calibrators to cover that wide range.

So, even after the first standard is injected, that's just one of six. It's only, you know, less than 20 percent of the calibration being injected out of the entire six that need to run.

THE COURT: Okay. But if three were outside of range, now you're talking about half of it.

THE WITNESS: But they're not outside of range, they're just -- I have a copy of the Discovery Order here. And I'm not sure if -- actually, if I printed -- I mean, maybe pulled that up and showed it you. The actual results and how the

time of the last calibration with that matches what is reported on the actual chromatogram as the result.

THE COURT: Let me ask you this question: What would you have to see in those calibration runs to say, Okay, we're not working properly?

THE WITNESS: After the last standard prints, then the actual -- it's no longer the raw data that will be printed out. The actual useable data will be printed out. So, then, if those standards are outside of the range because it's including all six standards to determine those values. Then, it would have to be within that narrow range of acceptability for each of the standards.

THE COURT: Do you have that printout with you?

THE WITNESS: I have it on a disk for the discovery, but I don't have the actual printout of it.

THE COURT: Do you happen to have that, do you know, for that day, the 22nd?

MR. FLOOD: I don't.

MS. WILLIAMS: Your Honor, while he looks, maybe, I could pull it up more quickly on the disk.

THE COURT: You want to try that?
THE WITNESS: Sure.
THE COURT: Thank you.
THE WITNESS: So, it's under the calibration curve and QC. You just have to, like, click through until you get to it.
MS. WILLIAMS: Just tell me when to stop.
THE WITNESS: This is for the 17th run, so the 24th -- or the 22nd should be after that.
THE COURT: Would it help if you went to the computer and looked?
THE WITNESS: Yes.
THE COURT: Okay. Would you?
MR. FLOOD: I may have what she's looking for. Are you looking for this?
THE WITNESS: No, the actual chromatograms associated with it.
MR. FLOOD: I showed you the chromatograms.
THE WITNESS: That's for the raw data.
THE COURT: Go to the computer, if you would please.
(Witness complies)
(Recess taken)

(Open court)
THE COURT: All right. So in the recess, y'all were able to find the correct page of the Discovery?
MS. WILLIAMS: Yes, Your Honor, we were.
THE COURT: All right. Have you shown it to Mr. Flood so he knows what you are looking at?
MS. WILLIAMS: Mr. Flood is looking at the Discovery right now.
THE COURT: Are you ready, Tyler?
MS. WILLIAMS: Your Honor, in his defense, I just gave him several.
MR. FLOOD: I think I'm ready.
THE COURT: Do you have printed out copies or just --
MS. WILLIAMS: I printed out one copy, yes, Your Honor.
THE COURT: All right.
MR. FLOOD: I am ready.
THE COURT: Okay. Is the State offering something at this time for the purposes of this hearing?
MS. WILLIAMS: Yes, Your Honor, State is.

Your Honor, may I approach the witness?

THE COURT: Yes.

MS. WILLIAMS: I apologize.

We have what's been previously marked as State's Exhibit No. 20, State's Exhibit No. 21, State's Exhibit No. 22, State's Exhibit No. 23, State's Exhibit No. 24, and lastly, State's Exhibit No. 25.

THE COURT: Any objection?

MR. FLOOD: I have to look at a couple of pages. But if I can just look at the rest, I don't think I will have any objections.

No objections.

THE COURT: All right. State's 21 through 25 are admitted for purposes of the hearing.

MS. WILLIAMS: Thanks, Your Honor.

May I publish?

THE COURT: Yes.

MS. WILLIAMS: I'm sorry, I put 20, but I'd like to correct that, 21 through 26.

THE COURT: Okay. So, it should be 21 through 26?

MS. WILLIAMS: Yes, Your Honor.

THE COURT: Thank you.

Q. *(BY MS. WILLIAMS)* Okay. Before the recess, you were explaining that there is actual correct data that is used. Is this a copy of that data? Is this correct data?

A. Yes.

Q. And State's Exhibit No. 22, is that also the correct data?

A. Yes.

THE COURT: When you say "correct data," you mean "final data" rather than raw?

THE WITNESS: Yes. So, this is the data that's based on all six calibration standards. So, this calibration occurred after my last standard was injected.

THE COURT: So, it just runs all six at the same time?

THE WITNESS: Each sample takes eight minutes to run. So, the raw data is -- it's injecting the first standard, and then it prints it out. It only takes into consideration what it has in the system already. So, then, when it injects the second standard, it takes into consideration, both, the first and the second, but there's still four more.

THE COURT: So, it's cumulative?

THE WITNESS: Yes. So, that's why the final -- so, this .025 value is based on the linearity of all six standards being considered.

THE COURT: So, it adjusts itself?

THE WITNESS: Yes.

THE COURT: Okay.

Q. (BY MS. WILLIAMS) And so --

THE COURT: I'm sorry. Let me make sure I am getting it.

So, in the first six runs, you're telling it what it should be reading, and it comes back and self-adjusts to those standards. So, if you were to repeat that, it would read all six correctly?

THE WITNESS: Can you say that one more time?

THE COURT: Are you following what I'm saying?

MR. FLOOD: I am, but that's not what -- I mean, by all means please ask.

THE COURT: No. If I'm wrong, I need to know.

The first time you put them all through you get certain results. And once it's finished, does the instrument figure out that it's reading incorrectly, because you've told it what it's

supposed to be reading, and then adjusts itself to calibrate to the proper readings --

THE WITNESS: No.

THE COURT: -- proper values? What's really happening then?

THE WITNESS: So it's just injecting. It's, basically, using -- it's collecting data as the instrument is running, and then once that sixth standard runs, and it has the data from that, it takes all six standards into consideration.

And then it -- based on those six standards, collectively, will determine, well, okay, that means the first standard is this; the second standard is this.

THE COURT: Let's keep going and see if I catch on after a while. Okay.

Q. (BY MS. WILLIAMS) Okay. So right here we see State's Exhibit No. 21, and this addresses, I guess, the .025 standard?

A. Yes.

Q. And so, as you said, this is the run through after all the samples -- the standards have been injected; is that correct?

A. Yes.

Q. And so -- correct me if I'm wrong, after

all, six of those samples have been inserted, now it's going back to check that .025 standard to see if it is within range now that everything has been contributed to the instrument?

A. Essentially, yes. It's not reinjecting it. It's just taking that information and saying, Okay. So this is really what the .025 standard is, based on all six standards that were injected.

Q. Okay. And so, all six standards have been injected, now, it's checking to make sure that that's really what the standard is?

A. After all six standards were injected, now it's saying this is what the result is of your .025 standard.

Q. Okay. And so now that all of the standards have been injected, the range has been listed as a .022 to .027, and the bottom here has it as a .024 is that within range?

A. No.

Q. And so now that we understand that all standards have been introduced into the instrument, if this reading would have been out of range, what would you have had to do per protocol?

A. Well, because this is run before I even run any case samples, I have a number of choices. I

could realiquot the curve and start over, or I could just wait until another day and try to redo the calibration curve again that day.

But this would not be acceptable. I could not -- I could not run cases or data with this if it was outside of the range.

Q. Okay. And it's this final report that you have to take into consideration?

A. Yes.

Q. All right. State's Exhibit No. 22, this is regarding the .05 standard; is that correct?

A. Yes.

Q. And the range states a .047 to a .052, and the ethanol states a .047, is that within range?

A. Yes.

Q. State's Exhibit No. 23, this is in regard to the .1 standard; is that correct?

A. Yes.

Q. And the range is a .095 to a .015; the ethanol stated is .098, is that within the acceptable range?

A. Yes.

Q. State's Exhibit No. 24, regarding standard .2. It states the range as a .190 to a .210, and it has the ethanol as a .197, is that within the

acceptable range?

A. Yes.

THE COURT: To save time, is it fair to say that the next few are also within the accepted range?

THE WITNESS: Yes.

THE COURT: All right.

Q. *(BY MS. WILLIAMS)* And so --

THE COURT: Move on.

MS. WILLIAMS: Okay.

Q. *(BY MS. WILLIAMS)* You mentioned earlier that you were building a curve?

A. Yes.

Q. Did this -- after the instrument had all six standards introduced, was this curve within range and allowed for you to move forward with the blood test?

A. Yes.

Q. And all of these actions that you took in making that determination, is that per the procedure and protocol of your lab?

A. Yes.

Q. And is it required to keep all three of your accreditations?

A. Yes.

Q. Lastly, it's become apparent that we're still determining the accuracy and reliability. Do you have in addition that you would like to tell the Court in regards to that issue?

A. I would. I guess, just solely based on the fact that my value was consistent with my values on my other runs on other days when there were no issues, leads me to believe that this value was also reliable.

In addition, if there were any issues, I'm not the only person that checks the run. We have numerous analysts that will, you know, come behind me and double-check things, as well as a technical reviewer, who will review the entire case as a whole. If they would have seen an issue with this curve, the run, or anything associated with the case, they would have sent it back to be repeated. Or they would have talked to me, possibly, the manager, if corrective action needed to be taken. After that, the manager is also the expert reviewer, who looks over the case again.

And so, because there are -- I'm not aware of any stops or issues or concerns throughout the entire time that this case was in the lab. And so, because of that, I do believe that the results

are accurate and reliable.

MS. WILLIAMS: State passes the witness, Your Honor.

THE COURT: Mr. Flood.

MR. FLOOD: Your Honor, first of all, I'd like to request that items in the Discovery Order that were not complied with be produced to us at this time. Specifically, Item No. 4. We had a Blood Discovery Order that was in place since December of 2014, and No. 4 is: "The laboratory's standard on general policies, protocol, and procedures concerning testing, quality control, quality assurance, calibration, achievement of the calibration curve, and administrative or technical review, if applicable, to all disciplines within the laboratory."

THE COURT: Hold on.

Do you have that with you?

THE WITNESS: Well, the Discovery Order is something that's handled by our quality department, and that is what's on the disk.

THE COURT: No, no, no. I'm just asking, do you happen to have those things with you, any of them?

THE WITNESS: I'm not sure if it's on

the disk. Our quality department also sent an email with additional materials, that I believe did include that.

THE COURT: Okay.

MS. WILLIAMS: Your Honor, we received that email; and so, we're about to print it. And so, Mr. Flood will get the information he subpoenaed for on Monday.

MR. FLOOD: Judge, we also issued a separate subpoena for this witness to bring these items to court that were not provided according to the agreed Discovery Order. I asked her, and she said --

THE COURT: Why didn't I know this Monday?

MR. FLOOD: We were hoping that they would come to court with the witness. And now there's this issue that comes up, so it makes it all the more important.

THE COURT: Tyler, I really appreciate your thoroughness, I do.

MR. FLOOD: We've been diligent, and we have an order.

THE COURT: I get that. But here's the problem: I feel like it's a surprise party that

all, six of those samples have been inserted, now it's going back to check that .025 standard to see if it is within range now that everything has been contributed to the instrument?

A. Essentially, yes. It's not reinjecting it. It's just taking that information and saying, Okay. So this is really what the .025 standard is, based on all six standards that were injected.

Q. Okay. And so, all six standards have been injected, now, it's checking to make sure that that's really what the standard is?

A. After all six standards were injected, now it's saying this is what the result is of your .025 standard.

Q. Okay. And so now that all of the standards have been injected, the range has been listed as a .022 to .027, and the bottom here has it as a .024 is that within range?

A. No.

Q. And so now that we understand that all standards have been introduced into the instrument, if this reading would have been out of range, what would you have had to do per protocol?

A. Well, because this is run before I even run any case samples, I have a number of choices. I

could realiquot the curve and start over, or I could just wait until another day and try to redo the calibration curve again that day.

But this would not be acceptable. I could not -- I could not run cases or data with this if it was outside of the range.

Q. Okay. And it's this final report that you have to take into consideration?

A. Yes.

Q. All right. State's Exhibit No. 22, this is regarding the .05 standard; is that correct?

A. Yes.

Q. And the range states a .047 to a .052, and the ethanol states a .047, is that within range?

A. Yes.

Q. State's Exhibit No. 23, this is in regard to the .1 standard; is that correct?

A. Yes.

Q. And the range is a .095 to a .015; the ethanol stated is .098, is that within the acceptable range?

A. Yes.

Q. State's Exhibit No. 24, regarding standard .2. It states the range as a .190 to a .210, and it has the ethanol as a .197, is that within the

acceptable range?

A. Yes.

THE COURT: To save time, is it fair to say that the next few are also within the accepted range?

THE WITNESS: Yes.

THE COURT: All right.

Q. *(BY MS. WILLIAMS)* And so --

THE COURT: Move on.

MS. WILLIAMS: Okay.

Q. *(BY MS. WILLIAMS)* You mentioned earlier that you were building a curve?

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MR. FLOOD: We've been diligent, and we have an order.

THE COURT: I get that. But here's the problem: I feel like it's a surprise party that

I keep walking in on over and over. Surprise. Surprise.

MR. FLOOD: That's the way I feel with this witness and her testimony.

THE COURT: I get that. But if you had told me Monday that we were still waiting for this discovery that I ordered a while back; stuff you subpoenaed for Monday -- you announced ready without it.

MR. FLOOD: I did.

THE COURT: And so, I'm frustrated by that.

I'm frustrated by the appearance of a Motion to Suppress that was, apparently, well thought out and well prepared in the middle of testimony. I'm frustrated by all these things being sprung. Now great strategy, I guess. But I'm worn out by them.

So, I'm going to recess for lunch, and I'm going to be back here at 2:00 if I can get myself some food and get back here.

In the meantime, I'm going to let y'all have a free-for-all here in the courtroom and figure out if you have what you need. Try to get some food. And y'all just let me know. If you're not ready by 2:00, somebody email me to stay where I

am for a few more minute. And by 2:15, I may end up sending the jury home. Because at some point, we've got to report to them on what we have and what we need -- what we have and what they need to hear to finish this trial. So -- questions?

MR. FLOOD: You also said we would reconvene with the Dr. Guale hearing too. I would assume that would take place after this, and that's going to take even more time.

THE COURT: Do we need -- I'll be back. We'll see when we get back. Thank you.

(Luncheon recess)

(Open court)

THE COURT: Okay. We're back on the record.

During the recess, we have had an opportunity, as a group, to sit down and discuss our questions with Dr. Gu-ale -- is that how she says her name?

MS. WILLIAMS: Yes, Your Honor, Dr. Gu-ale.

THE COURT: As follow up, is there anything else the State has with Ms. Peterson?

MS. WILLIAMS: No, Your Honor.

THE COURT: Mr. Flood, on this issues,

of course.

VOIR DIRE EXAMINATION

BY MR. FLOOD:

Q. In your standard operating procedures, there's guidelines that state there's a 5-percent target value -- plus or minus 5-percent target in the quality control in the standards, correct?

A. The standards and the quality controls are two different things, so --

Q. The standards.

A. For the standards, it's 5 percent; but for our lowest standard, that's 10 percent.

Q. Okay. And that the first standards that we saw in the batch run on the 22nd, there were three that were outside of the 5 percent, the .10, the .20, and the .30, correct?

THE COURT: Does that apply to those?

THE WITNESS: The 5-percent rule does not apply to the raw data, but it does apply to the standards that would be used for the runs associated with the cases.

Q. *(BY MR. FLOOD)* And Mr. Imrecke's sample that he was tested, his chromatogram, would also be considered raw data?

A. No.

Q. What do you call that?

A. The difference between the raw data and the reportable data is, specifically, the date of the calibration that I mentioned previously. So, on the reportable data, if you look at the last calibrated, next to the last calibrated, I believe, it has the time that's associated with the last time that the final standard ran and calibrated the instrument, prior to the case samples being run.

Q. But you reported his without being manipulated, right?

THE COURT: Without what?

Q. *(BY MR. FLOOD)* Without it being changed, you reported that as printed, right?

A. I didn't manipulate any data.

Q. Well, there's raw data, and then there's different data, what do you call that?

A. The reportable data.

Q. And raw data is what the chromatograms are that comes out of the machine?

A. It comes out before the final calibration standard has been injected, yes.

Q. And then, the computer will change the raw data by a macro or something for it to be reportable?

A. This doesn't change that data. It just

calculates what the standards would be based on the last calibrator being included in the calibration.

Q. Okay. Can you have an area count that it corresponds to, like, a .027, and then the exact same area count that corresponds to an 024? The area count should be different if the response is different, right?

A. Depending on the internal standard, we don't directly look at the area count of the standard without looking at the ratio between that area count and the internal standard.

Q. Okay. So, if the internal standard area count is exactly the same -- if it's one number and the ethanol area count, then we have two numbers, and it corresponds to a .027.

And then, you have an 024, you shouldn't have the exact same internal standard area and the exact same ethanol area count, should we?

You can't have two different response numbers with the exact same area counts on both peaks, can you?

A. I'm not sure. Because I -- the area count -- I think there's other factors that determine that, so I can't for sure answer that with a definite yes or no.

Q. Well, you realize that in this case the two different calibration chromatograms that you showed us, there's different response numbers -- quantifications, right?

A. The values are different, yes.

Q. But all of the internal standard and ethanol area counts are exactly the same on both sets?

A. Okay.

Q. Are you aware of that?

A. No.

Q. So, how are those numbers changed?

A. The value of the .025 standard, for example, is based on the calibration. So it's like we mentioned earlier, the calibration isn't complete until after the last standard being used to make the calibration has been injected. So, once the last standard is injected, then the proper value for each of the standards can be determined.

Q. All right. That first calibration is where it has the vials that are outside of the range on the raw data. The machine -- the autosampler, actually, picks up a headspace vial and injects the sample into the machine -- into the instrument, and it reads it, right?

A. Yes.
Q. Okay. So, to say that it's using yesterday's data, or something like that, that's not accurate. The beginning of that batch and those sheets we showed you where there's three standards that were out of range, those are actual samples being picked up and injected into the gas chromatography, correct?
A. Yes.
Q. And they were reading out of tolerance, correct?
A. The raw data did show that it was outside, yes.
Q. Right. The raw data, the first data, the data that came out, the chromatography said that it was not in compliance of 4.4.4 of your Standard Operating Procedures of saying, it must be within 5 percent, correct?
A. That doesn't apply to the raw data.
Q. My question was: Was it within the 5 percent of the range that it says on the sheet, right?
A. So, you're saying the printout -- the printed value was not within the range that's on that printout, yes, that's correct.

Q. Okay. And there's nothing in your procedures that talks about raw data versus any other type of data, it just says standard curves are constructed using appropriate procedures and pipetting techniques and that the calculated concentration standards must be within these 5 percent. There no -- raw data doesn't ever appear in there or other data after that fact, doesn't it?
A. Nope.
MR. FLOOD: All right.
I mean, I don't have any questions, Judge. But I reurge my issue.
This witness, I don't think, in my opinion, sufficiently explained it to the Court, and can't explain why the plain language of their Standard Operating Procedures wasn't followed. And there's no need to talk about raw data versus other data. It's not in compliance.
THE COURT: All right. And that objection is overruled. And that's all we're dealing with right now with this witness.
I have an idea: Why don't we have the officer come in and testify, for purposes of the hearing, for a minute or two, and see how many of the factors y'all can pull out of him, before I can make

a decision as to Dr. Guale.

Okay. Would you return to the witness room, please.

(Motion to Suppress Continued)

THE COURT: All right. You're back. Come on up here this time.

THE WITNESS: Okay.

THE COURT: Do you have a calculator with you?

THE WITNESS: I have it on my phone.

THE COURT: Would you mind pulling that out?

(Dr. Guale complies)

THE COURT: Are you comfortable using Widmark's Formula?

THE WITNESS: Yes.

THE COURT: Would you calculate for us what the result would be with our factors with Widmark. You tell me what you want me to tell you first.

THE WITNESS: Okay. So for me to use the Widmark Formula and do back extrapolation, I have to assume elimination phase.

THE COURT: Why?

THE WITNESS: The person was

eliminating.

THE COURT: Okay. And so, you're telling me that if we're still in absorption, you can't do extrapolation?

THE WITNESS: Because there's going to be missing data. Because you need to have the number of drinks, you know, that that person had drunk in grams, and then you have to put that in there. That means it's interrogate calculation.

THE COURT: And then --

THE WITNESS: It's not going to be retrograde, it's going to be interrogate calculation.

THE COURT: And so, let's say you don't know which one it is, which of your formula would you use?

THE WITNESS: I would use the Widmark Formula for elimination only, assuming elimination.

THE COURT: Okay. If we can't assume elimination, what would we use, which of those six formulas?

THE WITNESS: All formulas are the same. It's just the volume of distribution -- the value that they put into the volume of distribution.

THE COURT: Okay.

THE WITNESS: Let me put the formula

for you, and I'll explain to you what that means.

THE COURT: No, I'm with you now.

THE WITNESS: Okay.

THE COURT: So, if we don't --

THE WITNESS: Can I explain this to you?

THE COURT: No, hold on. Hold on. I think we're fine. I think they're just different ways of calculating the same thing, right?

THE WITNESS: Yes.

THE COURT: With different things, like body mass, instead of just weight and height and things like that?

THE WITNESS: Yes.

THE COURT: Okay. So, if you don't know when the person last ate, you cannot say with certainty whether they were in the elimination phase, right?

THE WITNESS: You can. But you can estimate by giving the maximum allowed. Like, for instance, if you tell me the person has a full stomach, and I want you to calculate it with, you know, two-hour absorption from the time that he's stopped. Like, he stopped at 12:00 o'clock.

THE COURT: Okay. Let's say the last

food and drink was at midnight.

THE WITNESS: Okay.

THE COURT: And he got stopped at 1:41.

THE WITNESS: Okay.

THE COURT: And tested at 2:36.

THE WITNESS: Okay.

THE COURT: And we're going to give him the maximum time for absorption --

THE WITNESS: Okay.

THE COURT: -- which is two hours.

THE WITNESS: Okay.

THE COURT: If I give you those circumstances, then, you know he's in the absorption --

THE WITNESS: I can assume he was absorbing the whole time until the incident.

THE COURT: Right. And maybe even 19 more minutes.

THE WITNESS: Nineteen more minutes. And I can subtract .024, which is the total concentration of alcohol you can obtain from having a two-hour absorption.

THE COURT: Okay.

THE WITNESS: Subtract that from .13,

and I can tell you it's going to be .11, giving the benefit of the doubt.

THE COURT: Okay. So, .13 is what you had estimated earlier?

THE WITNESS: Earlier, at 2:36, it was .136.

THE COURT: But what would you estimate, then, at the time of 1:41?

THE WITNESS: At the time of 1:41 --

THE COURT: You're going to --

THE WITNESS: So it's only 55 minutes. It can be --

THE COURT: So, it's going to be 13.

THE WITNESS: Yeah, yeah.

MR. FLOOD: You're assuming elimination of 1.1?

THE COURT: No.

MR. FLOOD: That's what she's doing.

THE WITNESS: That's the maximum that you can go. Like, 12:00 o'clock he stopped, okay. So, he was absorbing for two hours.

THE COURT: Right.

THE WITNESS: Which is going to be 2:00 o'clock, right?

THE COURT: Right.

THE WITNESS: So, at that time he would gain 0.02 grams of alcohol.

THE COURT: Right.

THE WITNESS: But you have up to 2:36, which is --

THE COURT: The test.

THE WITNESS: -- the test, which is .136. In 30 minutes, he can eliminate, at that time. And then, in 30 minutes, if a person eliminates .15 in one hour, I can have 30-minute elimination, which will be .007. So, add that; it will be 311; 143 and minus 02, which is 123 -- 0.123.

THE COURT: Is there any set of circumstances where someone who's a .136 at 2:36, would not have been .08 at 1:41 if they stopped drinking at midnight?

THE WITNESS: There's no way they would be .08. It would be above.

THE COURT: Questions?

MR. FLOOD: That is totally not true.

THE COURT: Are you answering me when I ask if you have questions?

MR. FLOOD: I have questions.

THE COURT: There you go. Now, we're on the right track. Ask them.

RECROSS-EXAMINATION

BY MR. FLOOD:

Q. You testified several times that you cannot extrapolate and give a number if a person is in the absorption phase?

A. You can give a range. You cannot extrapolate.

Q. A range?

A. Yes.

Q. What are you assuming to come to that number?

A. What I'm assuming?

Q. Correct.

A. What I'm assuming is -- it will go through the whole formula calculation it has to take. You have to tell me the number of drinks, and how many grams were in there.

Q. Okay. Do you have that -- do you have the number of grams in the drinks?

A. No, nobody told me that. How many grams? I don't have that.

Q. What else do you need? Now, you're doing an extrapolation back into the absorption phase; is that right?

A. Yeah, using that fact. Which the fact is,

I just used it to add the maximum that's from the literature.

Q. You need to know --

A. It's 2 hours.

Q. -- you need to know when his drinking -- you need to know the drinking pattern up to the stop, right?

A. No. It's just only calculating after he stopped. Before that, it doesn't matter whether -- his drinking pattern, or what kind of drinking pattern.

Q. Of course, it does.

A. The reason is, I'm basing my calculation based on the fact I have. That fact I have is: at 2:36 a.m., he had 0.136 grams of alcohol.

Q. Okay.

A. That is a fact. I can go back using that.

Q. To 2:00 o'clock?

A. Yes, to 2:00 o'clock.

Q. But not to 1:41?

A. I can go with that assumption I just gave you.

Q. Assumption?

A. No. Based on a fact of two hours absorption, we just give the benefit of the doubt, he

stopped at 12:00 o'clock. That was a fact that I was given. If he stopped at 12:00 o'clock, I can come back from .136 to that point using both absorption and elimination. That's all I need. And this is a fact. I don't care about what happens before 12:00 o'clock.

Q. What if he drank eight beers and three shots before midnight and that was his last drink, he's going to be absorbing for two hours?

A. Okay. For that, humanly possible, he should be vomiting and not physically possible to do that. That's impossible.

Q. That's your opinion. The Judge asked you if there's any scenario. If a person takes a bolus dose of alcohol at one time before midnight and stops, there's a scenario where he can keep rising from the whole two hours, right, and go from a low BAC to a high BAC, right?

A. But you have a stop time at 6:00 o'clock that doesn't work.

Q. I'm not asking about that. The question the Judge asked you, is there any scenario? And she didn't say at 6:00 o'clock. So, is there any scenario, if a person drank a large amount of alcohol and ended at midnight, in a short amount of time,

there is a scenario where he can --

A. But that's unbelievable. I don't believe that scenario exists.

Q. So, it's your personal belief, not basing it on what science dictates?

A. Science tells me this is humanly impossible.

Q. To go from a .08 to a 136 in two hours?

A. No. For your theory to work, for one person to drink eight drinks and three shots at one time, it's physiologically impossible for your body to absorb that much alcohol. And we're talking about slow absorption and fast absorption, let's get real here. When you do scenarios, please, assume a scenario that's possible, humanly possible.

Q. And we are. That's what we're talking about possibilities, not what your personal belief is.

A person could be at a .07 at midnight and have drank a certain amount of alcohol, a large amount, okay, it happens sometimes, right?

A. I don't know. Do you have proof? Is there's an open container in there or anything?

Q. I'm asking you to be a scientist right now, and not what your personal beliefs are.

THE COURT: Hold on. Done. We're done. Give us a minute. Okay.

I'm granting the Defense objection to the extrapolation.

I want to thank you for your patience, especially, with me and trying to explain all of this to me. I could be wrong in my ruling, but I'm following some old case law that I've been familiar with for a long time. Thank you so much for your help today.

THE WITNESS: Thank you.

THE COURT: All right. Results come in; extrapolation does not.

Are y'all ready for the jury?

You can release the officer, probably -- unless there's anything else you needed him for.

MR. SAWTELLE: I think that would have been it.

THE COURT: That's all you needed in the record, right?

MR. FLOOD: Yes, ma'am.

THE COURT: Okay.

THE BAILIFF: Please rise for the jury.

(Jury enters the courtroom)

THE COURT: All right. You may be seated.

Let the record reflect that the jurors have rejoined us. We have been, obviously, working on this, all day, outside your presence. And now, I think, we are ready to continue with you. And, hopefully, finish the evidence with you today, as well.

All right. I don't believe this witness has testified in front of this jury yet, has she?

MS. WILLIAMS: Yes, Your Honor.

THE COURT: She did. So sorry, it's been hours. We did stop at that moment with No. 20 being offered.

MS. WILLIAMS: Yes, Your Honor.

THE COURT: I caught up.

All right. State's Exhibit No. 20 is admitted before the jury.

You may proceed.

MS. WILLIAMS: Thank you, Your Honor.

May I publish?

THE COURT: Yes.

DIRECT EXAMINATION (CONTINUED)

BY MS. WILLIAMS:

Q. Okay. I believe this is where we last left. So, were you able to quantify the amount of -- sorry, the level of alcohol in the defendant's blood?

A. Yes.

Q. And did you follow all the protocols and methods mandated by your lab?

A. Yes.

Q. And are these the same protocols and method that are accepted by the scientific community as valid?

A. Yes.

Q. And so, was there any alcohol present in defendant's blood?

A. Yes.

Q. And how much alcohol was present in the defendant's blood?

A. 0.136, plus or minus 0.011 grams per 100 milliliters.

Q. All right. Are you aware, under Texas law, whether this is above or below the legal limit?

A. Yes.

Q. And what is the alcohol -- legal limit in Texas?

A. 0.08 grams per 100 milliliters.

Q. All right. And lastly, after you report your findings, and you finish your analysis, what other quality assurance checks are completed in your lab to determine if this is an accurate report and result?

A. So after I report my findings, the case moves to a technical reviewer, who will look at the entire case as a whole; and once they believe that everything is okay, the results are acceptable, it will then move on to the expert reviewer of the case. And then, there will be an additional set of eyes that look over the entire case before it's released.

MS. WILLIAMS: All right. State passes the witness, Your Honor.

MR. FLOOD: May I, Your Honor?

THE COURT: Yes.

CROSS-EXAMINATION

BY MR. FLOOD:

Q. This blood sample was tested three times, right?

A. Yes.

Q. And it was tested on December 17th; is that correct?

A. Yes.

Q. Of 2014?
A. Yes.
Q. And it was tested on 12/22/14?
A. Yes.
Q. And it was tested on 12/24/14, right?
A. Yes.
Q. Okay. And the 12/24 result was the number that you reported, correct?
A. Yes.
Q. That's a .136?
A. Yes.
Q. What was the result from 12/17/14?
A. .128.
Q. .128. And now -- there's two vials taken in this case, right?
A. Yes.
Q. And you labeled them A and B?
A. Yes.
Q. And this was the analysis from Vial A?
A. Yes.
Q. And this one that you reported was also an analysis from the same exact vial, right?
A. Yes.
Q. .136 and .128 on the first run, correct?
A. Yes.

Q. And then, on this one you got a .139, right?
A. Yes.
Q. And there were --
MR. FLOOD: May I approach the witness, Your Honor?
THE COURT: Yes.
Q. *(BY MR. FLOOD)* I'd like to show you Defense Exhibits 3 through 10 and just ask -- I think you've looked at them before but -- ask if you remember them or if they relate to the testing of this sample in this case?
A. Yes.
Q. Okay. Now, it's the laboratory's -- you have certain policies and procedures in place, that in order to keep your accreditation, they must be followed, right?
A. Yes.
Q. And one of those is that you're required to report the lowest result, correct?
A. The lowest result that is within 5 percent of another result.
Q. Okay. So, you got a 128 from Mr. Imrecke's blood, right?
A. Yes.

Q. Okay. But you reported a 136?
A. Yes.
MR. FLOOD: Your Honor, I'd like to show the State, Defense Exhibits 3 through 10 and ask that they be admitted.
MS. WILLIAMS: State has no objection, Your Honor.
THE COURT: And Defense 3 through 10 are admitted.
Have I seen 10? I don't remember. I remember 9, but I'm --
MR. FLOOD: This is the 12/22 result.
THE COURT: Oh, yes. Thank you.
Defense 3 through 10 are admitted. Thank you.
Q. *(BY MR. FLOOD)* You call gas chromatography the gold standard, right?
A. I call -- yes. Headspace gas chromatography for the analysis of ethanol.
Q. You call it the gold standard?
A. Yes.
Q. I'd like to show you Defense Exhibit No. 4. This -- so, you run -- you talked about how important it is, the quality controls working properly?
A. Yes.

Q. And you have standards, so this one right here is, like, a 025, right?
A. Yes.
Q. And these are standards that are purchased from an outside company, right?
A. Yes.
Q. And they're called "NIST" -- it's an acronym -- NIST-traceable?
A. Yes.
Q. Meaning that, you know, we purchased this; it should be exactly 025-alcohol concentration, right?
A. Yes. Within a narrow range, yes.
Q. Okay. So, there's a 5-percent acceptable range, right?
A. Well, this one is 10 percent, but the rest are 5, yes.
Q. Right. So, the low one is 10 percent, and everything else is the 5-percent acceptable range, right?
A. Yes.
Q. Okay. So, on this one, we get an 027, right, and that's within the acceptable range, correct?
A. Yes.

Q. Okay. And then, on Defense Exhibit No. 5, you run different levels of alcohol concentrations through the machine to see if the machine is able to detect it properly, right? I'm not using the -- probably, the exact scientific words that you would use, but it's a calibration, right?

A. Yes.

Q. And so, the machine only knows what you tell it, correct?

A. To a certain extent, yes.

Q. You can't just put something in the machine, and it says, Oh, I know exactly what this is. You have to introduce different levels of alcohol and say, I am putting in what I know is an 05; and then, I'm telling you this is an 05, when you initially calibrate, right?

A. Yes.

Q. And so, before a batch runs, you calibrate it again just to make sure it's still reading everything accurately, right?

A. No, I don't calibrate it twice.

Q. But during each batch run, you calibrate?

A. Oh, yes. Yes.

Q. Obviously, you calibrated, right?

A. Yes.

Q. Okay. So, on the 05 standard, you see the range and this 047 to 052, that's in accordance with your lab's standard operating procedures, that say the standards must be within a 5-percent range, right?

A. Yes, for our reported reportable data, yes.

Q. Okay. But there's nothing in your lab that says there's any difference between, like, raw data and reportable data, it just says standards must be within 5-percent range, right?

A. Yes.

Q. So, you're saying that there's a difference between this data, which is a chromatogram, and then some other data. But your standard operating procedures doesn't differentiate between that, right?

A. Yes, that's correct.

Q. Okay. So, this is the data; it's introduced into the machine, and it produces a chromatogram, right?

A. Yes.

Q. And the data then -- these are peaks that show the ethanol and the n-propanol, which is the internal standard, correct?

A. Yes.

Q. And the way it comes up with a number, like

052, is it measures this area (indicating) under the peak, right?

A. Yes, that is one of the ways that it determines how much is there.

Q. Like, the bigger the peak, the higher this number (indicating) would be proportionally, right?

A. Yes, to a certain extent.

Q. So, if this was a much smaller peak -- so, basically, this peek right here (indicating), it measures how much space is under it, and it converts it and says, this is an 052 amount of alcohol, correct?

A. Essentially, yes.

Q. Okay. And then, we see here (indicating) that's -- at the top range is the range of the lab's acceptable range, correct?

A. Yes.

Q. Okay. But then, we're move to Defendant's Exhibit No. 6. And so, this is from the same batch on December 22; this is the .10 standard. So, you introduce the .10 standard into the machine, correct?

A. Yes.

Q. And it measures the area inside the peak, correct?

A. Yes.

Q. And it translates it to a number of .108, right?

A. Yes, that's the raw data.

Q. Okay. Well, you keep saying "raw data," but going back to your standard operating procedures -- I want to clarify. There's no mention of any difference of this data versus any other data. It's chromatograms, and there's requirements that the standards be within 5-percent range, correct?

A. Yes.

Q. Is there a section in there that says, raw data doesn't have to be within 5 percent?

A. No. The raw data prints out as a result of the macro.

MR. FLOOD: Your Honor --

THE COURT: Hold on.

MR. FLOOD: I object to this --

THE COURT: Hold on.

MR. FLOOD: The answer is --

THE COURT: I asked you to hold on. My turn.

When y'all talk at the same time, no one hears either of you and the court reporter bursts into flames right before us all.

And so, I'm going to ask that when

you're asked a question and you start to answer it, if either side says, "objection." I need you just to stop for me for a second, and then let me hear his objection. All right.

THE WITNESS: Okay.

THE COURT: So?

MR. FLOOD: My objection was nonresponsive to the reminder of that answer.

THE COURT: All right. And that is sustained.

MR. FLOOD: All right. And I won't do that again.

THE COURT: Thank you. Go on.

Q. *(BY MR. FLOOD)* So, the .10 read a .108. That is outside of the 5-percent range, correct?

A. Yes.

Q. Okay. And again, there's no -- your standard operating procedures don't differentiate between raw data and reportable data. This is the data that came --

MS. WILLIAMS: Objection. Asked and answered.

THE COURT: It's overruled.

Q. *(BY MR. FLOOD)* -- this is the data that came from the machine, when this batch was run,

correct?

A. Yes.

Q. Okay. And then, we look at Defense Exhibit No. 7. And this is the .20 standard. We're moving up, right? And the acceptable 5-percent range is from a 19 to a 21, correct?

A. Yes.

Q. I mean, again, these are the standards that you purchased from the third party, right?

A. Yes.

Q. And they actually come with certificates saying that we're verifying this is exactly .20, right?

A. Yes.

Q. Okay. And the machine, however, was reading it as a .216, correct, on this data right here (indicating), correct?

A. Yes.

Q. Okay. And that's outside of the standard operating procedures' range of 5 percent, correct?

A. Yes.

Q. Okay. So, that's two of the internal standards that were out of the 5-percent range, correct?

A. Based on the chromatogram that you just

showed with the raw data, yes.

Q. Okay. And you keep using that raw-data word, right?

A. Yes.

Q. Which doesn't appear in the SOP at all?

A. Correct.

Q. So, this is Defense Exhibit No. 8. And the data on this shows a .323 level of ethanol, correct?

A. Yes.

Q. And the range of acceptability for the standard operating procedures is a maximum of a 315, correct?

A. Yes.

Q. So, this is outside of that range, according to your standard operating procedures on this data, right?

A. Yes.

Q. Okay. Now, you've got that -- there's one thing that we -- you've said that you've got to have two numbers that are within 5 percent to report it?

A. Yes. Two values of the three have to be within 5 percent, yes.

Q. Okay. So, you had a 128 from Vial A, right?

A. Yes.

Q. This was Vial B, correct?

A. Yes.

Q. And this is the one that you're saying was within 5 percent?

A. Yes.

Q. Because this number (indicating) and this number (indicating) is not within 5 percent, right?

A. Yes.

Q. And Mr. Imrecke's blood at a 12 is much lower than a 13, right, outside the 5 percent range, correct?

A. What was the question?

Q. These two numbers -- both from Vial A -- these two numbers were outside the 5-percent range, right?

A. Yes.

Q. Even though they were from the exact same vial?

A. Yes.

Q. Okay. But you went ahead and reported this number right here (indicating), correct?

A. Yes.

Q. Because it matched up within 5 percent of this number (indicating)?

A. Yes.

Q. And this is the one that we just went over, that had the three out-of-range standards, correct, on the data that we looked at, correct?

A. Yes.

Q. And you're basing that test to make this one okay?

A. Basing?

Q. You're using this test, the one that we just looked at, all of the out-of-range standards, you're using this one to say this was within 5 percent, and you're reporting this higher number; is that right?

A. Reporting the higher -- well, that number is lower than B.

Q. Right. This is the one that we had the problems with, but you're saying because it was within 5 percent, I'm going to go ahead and report this, correct?

A. I did report that. I'm not sure what your question is, I'm sorry.

Q. I'm just trying to say -- you've got to have two that are within 5 percent before you report it?

A. Yes.

Q. And the two you chose were from different

vials, right?

A. Yes, that's how it just turned out, yeah.

Q. And the one that you used to insert there (indicating) to get within that 5 percent, is this one right here (indicating) that we just looked at all those chromatograms from, right?

A. Yes.

Q. Okay. But the very first test that you had was the 128 on his blood, correct?

A. Yes.

Q. All right. Now, you said that it's important for the laboratory to follow strict standards, correct?

A. Yes.

Q. And everything about what you're doing, it's -- what was the BAC -- is that BAC of 136 that you reported, is that the BAC from the time that Mr. Imrecke was operating the motor vehicle?

A. That is from the time that the blood was drawn.

Q. And do you know what time that was? Have you seen the pictures?

THE WITNESS: Can I refer to my notes, Judge?

THE COURT: Yes.

MR. FLOOD: Do you mind if I --

Q. (BY MR. FLOOD) Do you want me to show you photos, or do you want to look at your notes?

A. I believe I have it in here.

Q. Okay.

A. On 12/13/14 at 2:36.

Q. And does that say the time of driving?

A. No. I don't -- I don't have that information.

Q. Okay. So, without -- here we go. I'd like to show you State's Exhibit No. 12, can you read this time on there?

A. It looks like 1:41.

Q. That's correct, 1:41. So, can you tell me what the BAC was at 1:41?

MS. WILLIAMS: Objection, Your Honor. Outside the scope, outside the witness' stated expertise.

THE COURT: I bet you can say "no" to that question, then.

A. Yes. I can say, no, to that question.

THE COURT: That objection is sustained.

MR. FLOOD: Okay. I'll pass the witness.

THE COURT: Thank you.

MS. WILLIAMS: Brief redirect, Your Honor.

THE COURT: Go on.

MS. WILLIAMS: Thank you.

May I approach the reporter for some exhibits?

THE COURT: Yes, ma'am.

MS. WILLIAMS: Thank you.

REDIRECT EXAMINATION

BY MS. WILLIAMS:

Q. Throughout your testimony with the defense, you mentioned this idea of raw data. What does raw data mean, and why was it pertinent in regards to your previous testimony?

A. Well, the raw data is just what the instrument -- it's -- so when I'm creating a calibration curve, it consists of six standards. And as he did mention, they are of a known concentration. But our instrument is unique, in the sense that, it is building that calibration curve, to determine our range of acceptable values that we're able to detect on the instrument, as it's running those curves -- I mean, running those standards. I'm sorry.

And so, the raw data is just -- the

instrument will take the first standard: it's injected; it prints it out. So, that printout of that standard is not all encompassing, in the sense that, the last -- the sixth standard hasn't been injected, yet, to be including in this curve to develop that range to develop our ethanol results for the case, for example.

MS. WILLIAMS: Your Honor, at this time, can I publish Defense 3 through 10?

THE COURT: Yes.

Q. (BY MS. WILLIAMS) All right. So, looking here at Defense Exhibits No. 3 -- and I'm going to -- now that we've gone -- I'll go in a little bit closer. What is Defense No. 3?

A. This is the chromatogram or the printout of the injections of one of the case samples associated with this case. So, it's the Tube A. As I mentioned before, it's the first tube that we run to screen -- to detect if there's any ethanol or blood alcohol present.

Q. And now getting to the specific tube that defense brought up to you, in terms of issues, this is Defendant's Exhibit No. 4. What is this?

A. So that's the first standard that is used in the calibration curve that I referred to earlier.

Q. And so, on this one that the defense showed you, was this curve that you tested the defendant's blood against?

A. This -- so this vial was used on the curve, but this value is just the raw data. And so, this value was calculated, not including all of the standards, yet, because they hadn't been injected.

Q. So, essentially -- and correct me if I get you wrong. This value was created before the instrument had been calibrated for that day with the proper standards?

A. Yes.

Q. In looking at Defendant's Exhibit No. 5 -- and I'll move it right here. What is this?

A. This is the second standard that is used to develop the calibration curve.

Q. And so, is this what you refer to as raw data?

A. Yes.

Q. And so, when this was printed out, had the instrument been properly calibrated using the six standards for that day?

A. At this point, it's the second standard out of the six; so, there were four more -- additional -- that had I to run.

Q. And on Defendant's Exhibit No. 6, is this the raw data that you mentioned?
A. Yes.
Q. And so, as of yet, when this was run, had all six standards been properly introduced into the instrument?
A. No.
Q. So, at that time, was the instrument properly calibrated?
A. No.
Q. Defendant's Exhibit No. 7, is this the raw data that you mentioned -- described to the jury?
A. Yes.
Q. And so, as of this time, had all the standards been introduced into the instrument for that day to make it properly calibrated?
A. No.
Q. All right. Defendant's Exhibit No. 8. Once again, is this the raw data that you explained to the jury?
A. Yes.
Q. And is there, yet, one more standard that needed to be introduced into the instrument?
A. Yes.
Q. And so, was it at this time properly

calibrated for the day?
A. No.
Q. So, my next question is: Can you explain to the jury whether any of those exhibits are relevant -- were relevant in your determination of what his blood-alcohol concentration was?
A. No.
Q. And why not?
A. Because they are not the calculated values that created the calibration curve, which was used to calculate the amount of ethanol in the tubes associated with this case.
Q. Okay. And so, let me bring your attention to State's Exhibit No. -- oh, what am I doing?
Defendant's Exhibit No. 5, are you able to tell what time that sample was analyzed -- sorry -- what time that standard was analyzed?
A. Yes.
Q. And what time is that?
A. The data was acquired at 8:04 and it's on the -- yes.
Q. Okay. And so, that's when the data was acquired?
A. Yes.
Q. Okay. And looking at Defendant's Exhibit

No. 6, what time was that data acquired?

A. 8:12.

Q. And so, without wasting any more time going through all those exhibits, as far as that first run, would we expect that each of them would be at a different time?

A. Yes.

Q. And why is that?

A. Because as I mentioned earlier, the curve it's creating -- the calibration curve -- as the instrument is running and collecting that data. And so, the time that it's acquiring -- as it's acquiring the data, it's updating the calibration up until the last standard. And then, from there --

MS. WILLIAMS: Your Honor, may I approach the witness?

THE COURT: Yes, ma'am.

Q. *(BY MS. WILLIAMS)* So, I have here what's been previously marked as State's Exhibit Nos. 21 through 26. Do you recognize these?

A. Yes.

Q. And are these graphs made in the ordinary coarse of business for your lab?

A. Yes.

Q. Anything been altered or changed or

tampered with since these tests were done?

A. No.

MS. WILLIAMS: Your Honor, at this time State moves to admit State's Exhibit 21 through 26.

May the record reflect that I am tending to opposing counsel.

MR. FLOOD: No objection.

THE COURT: State's 21 through 26 are admitted, for purposes of the jury now.

MS. WILLIAMS: Your Honor, may I publish?

THE COURT: Yes, ma'am.

Q. *(BY MS. WILLIAMS)* Now we are looking at State's Exhibit 21, what is this?

A. That is the first standard.

Q. By the time this standard was run, had been instrument been properly calibrated?

A. Yes. Well -- so, this standard was run at 7:56, but the instrument wasn't calibrated. Meaning that, it didn't collect all six data points until 8:40 a.m., which is under the last calibrated.

Q. (Pointing to last calibrated).

A. Yes.

Q. So here, looking at the range, it says .022

to .027 and the ethanol says .024, is that within the allowable range?

A. Yes.

Q. And so, you mentioned earlier that in order to do these analysis, you begin to build a sort of curve; is that correct?

A. Yes.

Q. And so, is this the beginning of that curve?

A. Yes.

Q. State's Exhibit No. 22, what is this?

A. That is the second standard that's used in the calibration curve.

Q. And it states that the range is a .047 to .052 and has the ethanol amount of .047, is that in the allowable range?

A. Yes.

Q. And so, are we still continuing to build that curve that you mentioned earlier?

A. No. Because at this point, the sixth standard has already been injected. And so, all of the calibration points are complete. And so, if you notice, it still will have that same time for the last calibrated. So, this is the data that can be used to report the result, as opposed to the raw

data, that I was referring to earlier.

Q. Okay. I believe you made a response to reportable data, is that what this is?

A. Yes.

Q. And this is State's Exhibit No. 23 -- excuse the 3 -- and what is this?

A. That's the third standard used in the calibration.

Q. And it says the range is the .095 to .105 and the ethanol is a .098, is this within the allowable range?

A. Yes.

Q. State's Exhibit No. 24, what is this?

A. That's the fourth standard.

Q. And once again, it says the range is .190 to a .210 has the ethanol within the .197, is that within the allowable range?

A. Yes.

Q. State Exhibit No. 25 -- and you let me know if I need to make it a little closer for you. Are you able to identify what this is?

A. Yes, that's the fifth standard.

Q. And it says the range is a .285 to a .315 and has the ethanol level at a .296, is that within the allowable range?

A. Yes.
Q. All right. State's Exhibit No. 26, are you able to identify what this is?
A. Yes, that's the final standard that's used for the calibration curve.
Q. And it says the range is .38 to a .420 and has ethanol level at a .404, is that within the allowable range?
A. Yes.
Q. So, when you tested the defendant's blood, it had been properly calibrated as established by the standards we just saw?
A. Yes.
Q. Okay. And so, there's been this question of raw data versus reportable data, is that a terminology and a practice that's used within your lab?
A. Yes -- well, it was at this time. Currently -- so, the raw data that prints out is, essentially, it has to do with the programming of the computer. And so, currently, we no longer have raw data.
Q. Okay. So, now you only have the reportable data; is that correct?
A. Yes. But at the time of this case, we did

use raw data -- or include it in our data packets.
Q. Okay. And that was the procedure used within your office?
A. Yes.
Q. And had it been used for some time?
A. Yes.
Q. And throughout that time, were you able to retain -- you said three accreditations?
A. Yes.
Q. And so just so I can make, you know -- correct me if I'm wrong. Once again, it seems as if that first -- the first exhibits we saw with the defendant's exhibits, is that when the instrument is initially turned on and beginning to go through the process of being about to be calibrated before you put in the standards?
A. I'm not sure what you are referring to.
Q. So you mentioned that there's six standards that you need to introduce into the instrument before it's completely calibrated?
A. Yes.
Q. The results that we saw, as far as Defendant's Exhibits 5 through 10 [sic], at that time had the standards been properly introduced?
A. No, not completely.

Q. So, the instrument, at that time, was not properly calibrated?
A. Correct.
Q. And were those standards -- were Defendant's Exhibit 6 through 10, were those the standards you tested the defendant's blood against?
A. Standards six through ten? No, I'm not sure --
Q. Okay. So, at that time before those standards had been introduced into the instrument, you had not analyzed the defendant's blood?
A. Correct.
MS. WILLIAMS: Oh -- a few more questions, Your Honor, if you don't mind.
Q. *(BY MS. WILLIAMS)* So, the first run came back at a .128; is that correct?
A. Yes.
Q. And so, it's necessary for you to make more than one run; is that correct?
A. Yes.
Q. And so, you then -- did you then test Tube B?
A. Yes.
Q. And that's when you got this .139?
A. Yes.

Q. And when you ran Tube B, that was the tube we were just discussing all these exhibits about, correct?
A. Yes.
Q. And so, when the instrument was properly calibrated, were there any issues, as far as level of the range or the proper range?
A. No.
Q. And so, this was a properly conducted analysis?
A. Yes.
Q. All right. And so -- so, why did you, then, have to run a third test?
A. I ran a third test because our strict standard operating procedures require that the two results must lie within 5 percent of one another. And so, in this case, they were outside of our 5-percent range; so, I was required to perform a third test.
Q. And do you know whether or not that's done in the benefit of the subject, that you require that 5 percent, that closeness between your two runs?
A. It's -- I'm not sure why 5 percent was determined, but I know it's very strict. And I do know that, typically, 7 to 10 percent is the range

that's allowed at other labs.

Q. So, your lab has a higher standard?

A. Yes.

Q. So, did you then have to do a third run?

A. Yes.

Q. And was .136 the result of that third run?

A. Yes.

Q. And so, after those three runs, by policy and procedure, in order to keep your lab's accreditations, what result are you then required to report?

A. I'm required to report the lowest value that's within 5 percent of another value.

Q. And so, in order to keep your accreditation in order to follow your lab's policies, you could not report this .128 number; is that correct?

A. Correct.

Q. And is that because you couldn't be absolutely sure of the accuracy of that number, based on your lab's procedures and standards?

A. It really just comes down to, it's required by the standard operating procedures; and as an employee, I'm required to follow the standard operating procedures.

Q. Okay. And so, out of run two and run

three, what was the lowest amount?

A. The .136.

Q. And is that the number that you reported?

A. Yes.

Q. And throughout the actions that you took in analyzing the blood and ensuring that the instrument was properly calibrated, you followed the policies and procedures?

A. Yes.

Q. And after you went through all those policies -- all those safe checks, was your work then checked again by someone else in the lab?

A. Yes.

Q. Is it just one individual, or do your results go through several other individuals?

A. It would be at least two other individuals.

Q. And at any time, did anyone bring it to your attention that any issues had occurred with your analysis or with your instrument, at the time of the test?

A. No.

Q. And to your knowledge, those two individuals are also properly following the protocols and procedures of the lab?

A. Yes.

MS. WILLIAMS: State passes the witness, Your Honor.

THE COURT: Mr. Flood.

MR. FLOOD: Thank you.

RECROSS-EXAMINATION

BY MR. FLOOD:

Q. I want to clarify something. Okay. You said that the documents that you gave defense showing the out-of-range standards, are no longer going to be produced to defense counsel anymore; is that correct?

A. The raw data.

Q. Okay. I'm talking about raw data doesn't show up anywhere in your SOP, right?

A. Yes.

Q. So, the data that showed the out of range numbers, you're saying that the lab has changed and is longer going to produce that in discovery; is that what I heard correctly, yes or no?

A. No.

Q. What did you say?

A. Can I explain it?

Q. Well, are you saying there's a change in the laboratory, though, on what you're going to produce and that's not going to be produced anymore?

A. No. Can I explain it?

Q. Okay.

A. So our laboratory requires that we submit or turn in everything that's printed from our instrument. At this time, the raw data was printed. We no longer -- that data is no longer printed; so, we don't have why chromatograms associated with that.

Q. Okay. So, I used the wrong words. So, there's been a change where any errors like that won't be able to be seen anymore, correct?

A. No.

Q. I'd like to ask you a question about one of these. For example, this 02 -- I'm sorry, Defense Exhibit 4, this a chromatogram. And, you know, on the chromatography machine, it has, like, a carousel, and then it has vials in it. And once you start it to run, there's sort of, like, a robotic arm, which will pick up a sample -- or get the sample and insert it in the machine over and over until that whole batch is done, right?

A. Yes.

Q. And so, to generate a chromatogram like this, it's not something that -- I mean, it happens because, like, this says vial one of one, right, Tray 1, Vial 1?

A. Yes.

Q. So, that was the first vial in that batch, that day, at that time, right?
A. Yes, as far as the calibration curve.
Q. And I just wanted it to be clear. It's not just making up some calibration from yesterday or another time. The machine, actually, took a sample of what was supposed to be .025 and injected it into the machine, right? That's the only way to get a chromatogram, right? It tested the 025 standard, Tray 1, Vial 1, right?
A. Yes, it's an injection of the .025 standard.
Q. And it read it as an 027, correct?
A. Yes.
Q. Okay. And so, when you go to the Defense Exhibit 6, the machine, Tray 1, Vial 3, of the same batch, it took a sample and the needle, and it injected it into the injection port of the machine, correct?
A. Yes.
Q. And it produced a result of a .108, right?
A. Yes.
Q. Okay. So, this is really happening in that batch: samples are going into the machine, there's a signal given to the flame ionization detector, and

then this is the amount that it is being converted to .108, right?
A. Yes.
Q. Okay. And so, it's reading a .10, which you know is that NIST-traceable standard. And it's reading it at a .108, which is higher than a .10, correct?
A. Yes.
Q. Okay. Now, just real quick, I don't want to get too technical with this. But this response, is that another way of saying, what the area that lies inside this peak?
A. Yes.
Q. How big of a response did you get, right?
A. Yes.
Q. Okay. So, this number is what the machine takes, and then it translates it into this number, correct?
A. I know that that's part of it. I'm not sure if that's --
Q. Well, I'm saying that this number (indicating) is a result of the area count of the peaks, correct, the response?
A. It's a result of the area count, as well as, it's based on the calibration.

Q. Right. So, this is 690646, right?
A. Yes.
Q. If that was 590646, then, this would be a lower number, right?
A. Yes.
Q. If this said 990646, it's a larger response; so, this would be higher than .108, right?
A. Yes.
Q. Okay. So, this response is directly related to that number, right?
A. It's somewhat, but it also depends on the calibration.
Q. Right.
A. Which is why this is referred to as raw data.
Q. Okay. So, that's why they're different ethanol amounts in different vials. And, say, there's different subjects running in that machine, you know, everybody might not have the same amount of alcohol in their blood, right?
A. Yes.
Q. Okay. And so, you expect to get different ethanol readings, right?
A. Yes.
Q. And you're going to see different response

numbers, correct?
A. Yes.
Q. Okay.

MR. FLOOD: I'll pass the witness.

MS. WILLIAMS: I'll make it brief, Your Honor.

THE COURT: All right.

FURTHER REDIRECT EXAMINATION

Q. *(BY MS. WILLIAMS)* So, this raw data -- you mentioned that the instrument is no longer going to be reporting that. Is that because it's some large error on the lab's part?
A. No.
Q. Is this part of some scheme to hide this evidence from defense attorneys?

MR. FLOOD: Objection. These are leading questions. Objection. Leading.

THE COURT: That's sustained. Rephrase.

Q. *(BY MS. WILLIAMS)* Is this done with some intent to not provide that evidence to --

MR. FLOOD: Objection --

Q. *(BY MS. WILLIAMS)* Why are these reports no longer being printed?
A. I am not sure of the complete reason

because it is -- this is more of -- something that has to do with our quality department. And so, they would be the ones that would be better suited to answer the question.

Q. Okay. In your experience, though, is this raw data applicable, in terms of the analysis -- the reliability of the blood analysis?

A. No.

MS. WILLIAMS: No further questions, Your Honor.

MR. FLOOD: I pass the witness, Your Honor.

THE COURT: All right. May this witness be excused?

MS. WILLIAMS: Yes, Your Honor.

MR. FLOOD: Yes, ma'am.

THE COURT: All right.

Thank you, ma'am, you are finally free to go.

(Excerpt testimony concluded)

STATE OF TEXAS

COUNTY OF HARRIS

I, Ramona St.Julian-Sonnier, Official Court Reporter in and for County Criminal Court at Law Number Five (5) of Harris, State of Texas, do hereby certify that the above and foregoing contains a true and correct transcription of all portions of evidence and other proceedings requested in writing by counsel for the parties to be included in this volume of the Reporter's Record in the above-styled and numbered cause, all of which occurred in open court or in chambers and were reported by me.

I further certify that this Reporter's Record of the proceedings truly and correctly reflects the exhibits, if any, offered by the respective parties.

WITNESS MY OFFICIAL HAND on this, the 27 day of February, 2016.

/s/Ramona St.Julian-Sonnier

Ramona St.Julian-Sonnier, CSR
Texas CSR 6070
Official Court Reporter, CCCL No. 5
Harris County, Texas
1201 Franklin, 9th Floor
Houston, Texas 77002
Telephone: 713-755-6196
Expiration: 12/31/2017

the time on the same grounds, you know, just for the record.

MR. MOSS: Both of our witnesses are here, judge.

THE COURT: All right.

THE BAILIFF: All rise for the jury.

(The jury entered the courtroom)

THE COURT: Please, be seated.

Call your next, please.

MR. MOSS: The state calls Dr. Guale.

(witness sworn)

THE COURT: Proceed, please.

MR. MOSS: May I proceed, Your Honor?

THE COURT: Yes.

FESSESSEWORK GUALE

was called as a witness and having been first duly sworn, testified as follows:

DIRECT EXAMINATION

QUESTIONS BY MR. MOSS:

Q. Will you, please, state your name for the record?

A. Fessessework Guale.

Q. And, Ms. Guale, how are you employed?

A. Excuse me?

Q. Who are you employed by?

A. Who am I hired by?

Q. Yes, ma'am.

A. Okay. It is the Harris County Institute of Forensic Sciences.

Q. And what is your role at that institution?

A. Right now I am the assistant chief toxicologist.

Q. And as an assistant chief toxicologist, what are some of your duties?

A. One of my duties is to make sure that the day-to-day operation of the laboratory is correct, and I have to make sure that the cases coming in and going out on the right time, and I supervise the employees or all of the analysts that are in the lab. I do, you know, make the developments and projects and presentations and papers and so many things that we do.

Q. Do you also in that role analyze data of blood samples?

A. Yes.

Q. What type of training and education have you had to qualify you for that?

A. Well, in addition to my doctorate's degree in veterinary medicine, I have a master's degree in toxicology; and what it does is they indicate to us

about the affects of drugs and other toxins in your body, their chemistry and what their behavioral outcome is and what the physical affect is; and every process once the drug gets into your system until it is out.

Q. And do you have any sort of, I guess, training?

Did you do training for this?

A. Yes. We do have several continuing education training. We do hold and we go and participate in workshops like in forensic toxicology; and we hold one in ourselves inviting a lot of toxicologists to learn; and we go for workshops, conferences, international conferences and just like that; and we are one of the pioneers in organizing and setting up training for other individuals.

Q. And how long have you been with the Institute of Forensic Sciences?

A. Six years.

Q. Have you held that role or at least part of your duties been in toxicology that entire time?

A. Yes. Ever since I started, I started as a Toxicologist 2 which I was doing section leading. I was leading one section; and then I became a manager; and then I have another, you know, position open; and

then I get promoted to assistant chief toxicologist.

Q. And you said that you work for the Institute of Forensic Sciences, right?

A. Correct.

Q. What exactly does the Institute of Forensic Sciences do?

A. We do take samples from different law enforcement agencies in Harris County and the surrounding areas, and also we perform personal toxicology for the medical examiner. So we do have two different sections, but we do DWI or drug sexual assault and drug toxicology.

Q. One of the roles of the forensic scientist is to analyze blood?

A. Correct.

MR. MOSS: May I approach the witness, Your Honor?

THE COURT: You may.

Q. (By Mr. Moss) Dr. Guale, I am going to show you what has been previously marked as State's Exhibit No. 3.

What exactly is this?

A. This is -- I received two blood tubes containing blood in a box.

Q. Now, do you have any sort of indication on

there that your office received and analyzed this blood?

A. Yes, because the data that I have here in front of me that I brought from the lab matches all of the numbers -- the unique identifying number matches with what is on the tubes.

Q. And is the tape that we see on here on the outside box, is that tape from your office?

A. Yes. This is Andre Salazar. It is taped and signed by Andre Salazar. That is one of our analysts who opened the box.

Q. Is there a date on there?

A. Yes, the date is 10-18-2010.

Q. Now, when they put that tape and date it and put their initials on it, what are they doing?

A. That means they opened it at one time to take out the blood sample for analysis; and they put it back; and then when they put it back, they taped it back and signed their signature on it.

Q. And we see another date on there?

A. Yes, 10-22-2010.

Q. And then if we look at the box on the inside, is there also tape on that box?

A. Yes.

Q. And the first initials and date, who is that

person?

A. That person is Andre Salazar. It is the same person that is on the out box, and the bottom was -- it is very hard to see. It looks like J-O-D-C-A. Yes, it is very hard to see.

Q. And what is the date if you will look right there?

A. Okay, 10-22 or 26.

Q. 10-26?

A. Yes.

Q. Now, whenever somebody takes out the blood and cuts it open and tapes it back, do they make a record of that?

A. Yes, and it is electronically also saved through our laboratory information management system.

Q. And did you at the end of all of this testing, did you take the raw data and turn it into -- did you analyze it and make a conclusion; or were you able to accumulate that data and make that report?

THE COURT: Did you say what year?

THE WITNESS: 2010.

THE COURT: You said at the end of?

MR. MOSS: At the end of collecting the raw data, was she able to take the raw data and analyze it?

A. Once the analyst performs the blood sample and puts it on the instrument, then the instrument will put out the report about the result of that analysis.

That report is included in this folder; and then that report is signed by the analyst who performed the test; and all of that is combined; and then when the case is done, it comes to a technical reviewer; and then the technical reviewer will go through the data and make sure that the data is produced properly, the chain of custody is done properly and the standard operation procedure is followed; and then once they make sure of that, they sign it on the form, that is the technical reviewer.

Once the technical review is done, then it comes to the administrator or the expert reviewer to see whether that report is correct in correct toxicology; and then it will be signed out.

Q. (By Mr. Moss) So in essence are you the technical reviewer in this case?

A. No. I am the expert reviewer on this case.

Q. The expert reviewer?

A. Right.

Q. So whenever you get this data to review it, you go in and ensure all of the other things are done

correctly before it gets to you?

A. Yes.

Q. And you have paperwork to do that?

A. Yes.

Q. Now, State's Exhibit No. 3 and its contents, are these -- this data on these tubes and this box match the data that you have in your file?

A. The unique identifying number that is on the report which is JAJ-10-009245 is on these blood tubes. JAJ-10-009245, that would be correct.

Q. And I am going to show you what is marked as State's Exhibit Nos. 6, 7, 8 and 9.

Do you know what those documents are?

A. This is a certificate of analysis by Crystal Arndt, a certificate of analysis by Paola Alexandra Velasco, a certificate of analysis by Andre Salazar and a certificate of analysis by Jameaker Dumas.

Q. Do those four certificates of analysis, are they the same unique number that you have in this case?

A. Yes, all of them do contain the same, the unique identification number of the exhibit that is presented here and correct.

Q. And so by those records, were you able to establish that this is the same tube that was tested

by your office?

A. Correct.

MR. MOSS: At this time, Your Honor, the state will introduce into evidence State's Exhibit No. 3 and its contents which is the blood and States's Exhibits 6 through 9 which are certificates of analysis which have been on file for the requisite period of time; and I will tender them to the defense counsel for any objections.

MR. GLASS: Your Honor, I am going to object to --

THE COURT: Hang on a second.

Nos. 6 through 9 and?

MR. MOSS: No. 3 and its contents.

MR. GLASS: Your Honor --

THE COURT: Okay. Never mind.

Okay, Nos. 3, 6, 7, 8 and 9?

MR. MOSS: Yes, Your Honor.

THE COURT: Yes, Mr. Glass.

MR. GLASS: May I have just a moment, judge?

THE COURT: Yes.

MR. GLASS: Judge, may I approach?

THE COURT: Uh-huh.

(At the bench, on the record)

MR. GLASS: My objections to these lie in the fact that first of all, we don't get to cross-examine. They are affidavits of certificates. We don't gets to cross-examination. We are denied our right to cross-examination.

Secondly, they contain conclusions that were by the laboratory. We don't know what procedures were used. In the absence of being able to cross-examine these people, we don't feel like these certificates properly satisfy the required constitutional requirement that we be allowed to confront and cross-examine the persons who allegedly did these analyses.

THE COURT: Mr. Moss.

MR. MOSS: Our response would be that they were put on file in March of 2012. We gave a copy to the defense counsel, and there was no written objections within ten days as specified by the code.

MR. GLASS: My belief, judge, is that the Constitution supercedes the code as far as the confrontation and cross-examination goes.

THE COURT: I was going to ask if you want to make it anymore clear as to those certificates of analysis.

MR. MOSS: I can do that.

THE COURT: Okay. Your objection is only as to Nos. 6 through 9 and not as to No. 3.

MR. GLASS: Which one was No. 3, judge?

THE COURT: The vials.

MR. GLASS: I don't think that there is any problem with the chain of custody.

(Proceedings in open court)

THE COURT: State's 3 is admitted at this time.

Q. (By Mr. Moss) Where did you -- looking at these certificates of analysis, does your analysts do these in the normal course of business?

A. Yes.

Q. What exactly is a certificate of analysis?

A. This is an affidavit of a person who performs the test, that the test was performed by them; and that they followed the normal procedure as much as their ability and the result is correct.

Q. Looking at the four names on these, Crystal Arndt, Andre Salazar, Jameaker Dumas and Paola Alexandra Velasco, these four people, are they employed by your office?

A. Yes.

Q. Do the four names in these certificates of analysis match the names that are in your records?

A. Yes, each data is signed by them. The data that is in this case folder is signed by them. Like, for instance, if I may. This data like the alcohol data was signed by JOD that is her signature which is Jameaker Dumas.

Q. So looking at the data that we have?

A. Yes. Right here that is the basic drug screen that was loaded on the instrument by Crystal Arndt.

Q. And what date was that?

A. 10-26.

Q. And is it the same date as in State's Exhibit 6?

A. Yes.

Q. And then Andre Salazar?

A. Andre Salazar took the sample or pulled the sample for alcohol analysis on 10-18-10.

Q. And is that the same as in State's Exhibit 8?

A. Correct.

Q. And then Ms. Dumas?

A. Jameaker Dumas, she pulled another alcohol analysis for a confirmation analysis for the alcohol on 10-21.

Q. And is that the same date as we are talking on this case?

A. Yes.
Q. I am sorry, State's Exhibit No. 9?
A. Yes.
Q. And then finally Paola Alexandra Velasco?
A. Paola Alexandra Velasco was the extractor on 10-25-10.
Q. Is that the same date as the State's Exhibit No. 7?
A. Yes.
Q. And so when you went through this data to get your analysis and performing the analysis on the data, you went back and made sure that everybody had done their job correctly?
A. Yes.
MR. MOSS: At this time, judge, we will re-urge State's Exhibits 6 through 9.
MR. GLASS: Your Honor, may I take the witness on voir dire?
THE COURT: You may.
MR. GLASS: Thank you.
Ma'am, you did not participate personally in any of the procedures resulting in the examination of these vials, did you?
THE WITNESS: You mean writing the procedures, yes, I do.

MR. GLASS: No, no.

I mean, you did not participate along with Velasco, Dumas, Salazar and Arndt in any of this work, did you?

THE WITNESS: No, I did not touch the blood. No, I did not analyze the blood.

MR. GLASS: And you have no personal knowledge, do you?

You know what they are supposed to do, but you have no personal knowledge of what they actually did, do you?

THE WITNESS: I do because I supervise them.

MR. GLASS: Did you supervise them while they were doing these analyses?

THE WITNESS: Yes.

MR. GLASS: At the very same time?

THE WITNESS: When I say supervise them, we do have assignments every day; and then I go and look at what they are doing. I may not look at each at that particular minute on which sample they are working on because we do batch analysis.

So batch analysis like, for instance, when they were doing alcohol, they probably have 30, 40 alcohol tubes there which are really different

numbers. So another analyst will sign about the identity of the tubes, not me; but because we are doing a batch work, we do not do individual samples.

MR. GLASS: Right.

But you can't say, "I was overseeing what each of these persons was doing with regard to these vials each of the times they had these particular vials"?

THE WITNESS: No, no.

MR. GLASS: Okay. So what you are basically telling us is that if they followed procedures, everything should be okay; but you don't know personally whether or not they followed procedures?

THE WITNESS: I do know that they followed procedures.

MR. GLASS: Ma'am?

THE WITNESS: Yes.

MR. GLASS: Will you agree with me that you can't know unless you are watching them do it, right?

You can't personally know unless you are watching them do it. You told us that you didn't watch them do it.

THE WITNESS: Yes, that is correct.

MR. GLASS: All right.

Your Honor, we would re-urge our previous objection at the bench; and also, these appear to be copies, that the originals have not been tendered; and we object to the copies.

THE COURT: Prove it up a little bit, please.

MR. MOSS: Yes, Your Honor.

Q. (By Mr. Moss) I am handing you State's Exhibits 6, 7, 8 and 9.

Are these true and accurate copies of the certificates of analysis that was written by these four individuals?

A. Correct.

Q. And you have the originals in your folder?

A. Yes.

MR. MOSS: I will again re-urge Nos. 6 through 9, Your Honor.

THE COURT: State's Exhibits 6 through 9 are admitted.

MR. GLASS: Is this court overruling our objection?

THE COURT: Yes.

Q. (By Mr. Moss) So after you ensured that the analysis -- let's start at the beginning.

So the blood comes in, and somebody does -- what is the first test run in this case?

A. The first test was an alcohol test.

Q. And what machine is used to do that test?

A. A GC, gas chromatography.

Q. And how does that work?

Is there a specific thing done, or you kind of stick it in there and push a button?

A. A gas chromatography is an instrument that has two parts where first you prepare the sample in a tube or in a glass vial where you add the blood sample in there, and there will be an internal standard added in there and a saline standard added in there, and the theory behind it is whatever is in the -- whatever amount of alcohol that is in the sample would vaporize and fill out the top part of the space. So we call it head space gas chromatography.

You put that vial in the instrument, and the instrument will sample the gas phase from the tube and put it in the column where several different alcoholic components of that gas would be separated; and then if the GCMS, which is the gas chromatograph mass spectrum, which vaporizes it and burns it and then gives out the result of the amount of different alcohols in that sample.

Q. And so when that is done, in essence, an analyst takes that blood, puts it into the machine; and the machine runs a bunch of tests, right?

A. Yes.

Q. And then you get a result from that machine?

A. Yes.

Q. Are these machines calibrated?

A. Yes.

Q. How often are these machines checked for calibration?

A. Every day.

Q. In this case, was the machine calibrated on the day in question?

A. Yes.

Q. So after the blood was run in this case for the Ethanol or the alcohol, were there any additional tests run?

A. Yes. After the alcohol is performed, we do a screen sample for drugs, nine drug panels which includes Amphetamine, Methamphetamine, Barbiturates, the Opiates, the Cocaine, the PCP and Methadone. So it was screened for that drug, for those drugs.

Q. And if blood is found to have contained one of those drugs, is it further analyzed?

A. Yes. If one of those analysis comes back

positive from a screen, what we do is we do a confirmation testing. Like we have two blood vials, one blood vial would be screened; and if that comes back positive for any drugs that is screened for, the second blood would be confirmed on a different instrument.

Q. And was this blood found to contain any sort of drugs?

A. Yes. The first screening we found Nordiazepam. When we run those nine drug panels that we do for DWI cases, and then the Benzodiazepine is just a general drug group. So we have to know what kind of a Benzodiazepine is in there, so we have to process the sample and use LCMS for liquid chromatography mass spectrometry to identify what kind of a Benzodiazepine drug is in there.

Q. And was that test run on this blood in this case?

A. Yes.

Q. And did you get the results of those tests?

A. Yes.

MR. MOSS: May I approach the witness, Your Honor?

THE COURT: You may.

Q. By Mr. Moss) Let me show you what has been

previously marked as State's Exhibit No. 10.

Do you recognize this document?

A. Yes.

Q. What is it?

A. This is the final report for the case JAJ-10-009245.

Q. And did you generate this report?

A. Yes.

Q. And is your signature at the bottom of this report?

A. On the right side, yes.

Q. And are these findings and conclusions in this report your findings and conclusions?

A. Yes.

Q. And is it a true and accurate copy of that report?

A. Yes.

MR. MOSS: At this time, Your Honor, the state will introduce into evidence State's Exhibit No. 10 and tender it to the defense counsel for objection and ask for it to be admitted.

MR. GLASS: May I have a moment, Your Honor?

THE COURT: You may.

MR. GLASS: Your Honor, may I approach?

THE COURT: You may.

(At the bench, on the record)

MR. GLASS: Your Honor, I would re-urge the objection made outside the presence of the jury made with regard to the alcohol under the balancing test and under 403. The unfair prejudice outweighs any probative value with regard to the alcohol.

Secondly, with regard to the Nordiazepam, judge, I think we have the same argument under 403, it is the danger of unfair prejudice point. The result of .01 milligrams per liter of this drug would tend to -- would invite the jury to speculate on how that would affect a person's system; and unless there is evidence as to what this amount means to a person in their conduct, vis-a-vis intoxication. All it does is invite the jury to speculate.

THE COURT: We may need some additional testimony.

MR. MOSS: Okay.

(Proceedings in open court)

Q. (By Mr. Moss) Dr. Guale, the two drugs, the Nordiazepam and the Tramadol, what type of drugs are those.

A. Nordiazepam is a metabolite or the breakdown product of a Diazepam. That is a drug that is

prescribed for a person to take care of, you know, for anxiety purposes.

Q. Let's talk about the Diazepam.

Is there a classification that Diazepam falls under, and how it would affect the nervous system?

A. Yes. This is a central nervous system depressant.

Q. What does that mean?

A. It means that if you are taking it for a prescribed purpose of it, the mechanics of the drug is just to calm you down. Sometimes it is prescribed for people who have panic attacks and anxiety, so it will calm you down if you are very hyper; but if you are taking it more, then it would just depress your mental system; and it will cause drowsiness.

Q. What type of -- well, is alcohol classified as a CNS depressant as well?

A. Yes. It is the same affect that the drug would have just like the alcohol depending on how much you have ov it.

Q. In this case, what was your finding as to the amount of drug?

A. The amount in this case given the fact that the active drug is not there, it is just only the

metabolite or the breakdown product, it is really a small amount. It really does not amount that much. It does not have any affect whatsoever.

Q. Now, could a CNS depressant like a Diazepam have a synergistic affect with Ethanol?

A. Yes. Whenever you are prescribed with those kinds of medications, there is a warning label saying, "Please, do not take it with alcohol," because it intensifies the affect of alcohol.

Q. So any amount of Diazepam intensifies the affect of alcohol in a person?

A. Yes, if you are combining it, yes.

Q. So in this case, could the Diazepam have had a synergistic affect with the Ethanol?

A. It does have a synergistic affect with Ethanol, yes.

Q. What type of drug is a Tramadol?

A. Tramadol is a synthetic narcotics, and it is a pain killer, and it is usually prescribed if you have pain. If you have arthritis, if you have back pain such as like that to just have an analgesic affect to kill the pain.

Q. What kind of affect does it have on the central nervous system?

A. It will also have -- because it is a

narcotic, it will also have the same affect or potential affect. When you are taking it with alcohol, it is usually a synergistic affect. It would make the down side or downward of the alcohol to get intensified.

Q. So could it also have a depressant affect on the central nervous system?

A. Yes.

Q. Was the amount in this case was it a low amount?

A. It is an under normal therapeutic label.

Q. But when taken with the alcohol, it could have a synergistic affect?

A. Yes.

Q. And taking all three, the Tramadol, the Nordiazepam and the Ethanol, could all three combined have a greater synergistic affect?

A. Yes.

MR. MOSS: We will re-urge State's Exhibit No. 10.

MR. GLASS: May I have a question or two on voir dire, Your Honor?

THE COURT: You may.

MR. GLASS: You mentioned, ma'am, that it could have, it could have.

By looking at that, would it be fair to say that you wouldn't say necessarily that it had a synergistic affect at the time this sample was taken, can you say that?

THE WITNESS: Well, according to what is written in the articles and those drugs that have got the same affect even though it is a prescription drug, right. You are prescribed that drug for that purpose, be it either anxiety or whatever you have. You are told not to do it with alcohol because it has a potential affect to the alcohol. So that is what it is. The fact is that is what it is.

MR. GLASS: But you are talking about possibilities?

THE WITNESS: It is not a possibility. It is a fact.

MR. GLASS: All right, but you can't say what the synergistic affect of these small amounts combined with alcohol can be, can you?

THE WITNESS: Say the question again?

MR. GLASS: Yes, ma'am.

We are showing less than .25 milligrams per liter of the Tramadol?

THE WITNESS: Yes.

MR. GLASS: And less than .01 milligrams.

That is one-one hundredth of a thousandth of a gram of Nordiazepam.

THE WITNESS: Yes.

MR. GLASS: And my question to you is: At the time this was taken, two-and-a-half hours or whenever he was in the hospital Mr. Brown, you can't say exactly what kind of affect these drugs combined with .08 Ethanol alcohol would constitute in his system, can you?

You can't say for sure?

THE WITNESS: I don't know what kind of symptoms he had because I didn't see him. I cannot say for sure, but I can only state to you the fact that it is for sure it would have affects if you are combining it. That is the fact; but at that point, what you are asking me is when was the blood taken whether or not he has been showing that affects or not, I don't know.

MR. GLASS: But the affect that it showed could be little to none to something you can see, right, somewhere within there?

THE WITNESS: Yes.

MR. GLASS: Okay; and you really don't know which it would be, correct?

THE WITNESS: Which what?

MR. GLASS: Whether it will be just a little affect or almost no affect or a noticeable affect, you don't know from this, do you?

THE WITNESS: I can tell you that it will have an affect, but I don't know how much. I don't know how much affect it is because I didn't see. I cannot say anything about that.

MR. GLASS: But it could be such a small affect as not to be negligible, could it?

THE WITNESS: It could.

MR. GLASS: Your Honor, we will renew our previous objection made at the bench under 403; but the court has already ruled on it.

THE COURT: Yes. That is overruled.

State's Exhibit No. 10 is admitted.

MR. MOSS: May I publish it, Your Honor?

THE COURT: You may.

Q. (By Mr. Moss) Just looking back, your findings was he was a .08 grams per milliliter of Ethanol in the blood; is that correct?

A. Per hundred milliliter, correct.

Q. And so we hear -- I am sure you have heard about having a .08 BAC?

A. Yes.

Q. That is essentially what this is saying?

A. Yes.

Q. And then he had some Nordiazepam and some Tramadol, right?

A. Yes.

MR. GLASS: Your Honor, may I have a running objection?

THE COURT: You may.

MR. GLASS: Thank you.

Q. (By Mr. Moss) You said that they were all received and processed?

A. Yes.

MR. MOSS: I will pass the witness, Your Honor.

CROSS-EXAMINATION

QUESTIONS BY MR. GLASS:

Q. Ma'am, the result of this test is valid only at the time the test is taken; isn't that correct?

A. That particular blood sample?

Q. Yes.

A. Yes.

Q. Now, you are not able to say what the blood results would be two, two-and-a-half hours before that time, are you?

A. Depending on where the person was. I mean, I don't know where was the person.

Q. I understand that; but what I am saying is based on this, there is no way that you can tell this jury --

A. Yes.

Q. -- what the blood alcohol level was or what the levels of these two controlled substances were or prescribed substances were two-and-a-half hours before this; isn't that correct?

A. Without having any other information, no, I cannot say anything.

Q. And, in fact, the blood alcohol could have been either higher or lower or the same two-and-a-half hours earlier; isn't that correct?

A. Like I say, I can't speculate because I don't have any information; but you are right. It could be higher. It could be lower depending on several factors.

Q. Or it could be the same depending on factors that we don't know?

A. Yes.

MR. GLASS: I have no further questions, Your Honor.

MR. MOSS: I have no further questions, judge.

THE COURT: You may stand down.

CAUSE NO. 2024734

STATE OF TEXAS	)	IN THE IMPACT COURT
vs.	)	
JOSE LUIS DELACRUZ	)	HARRIS COUNTY, TEXAS

MOTION TO SUPPRESS HEARING

July 19, 2016

On the 19th day of July, 2016, the following proceedings came on to be held in the above-titled and numbered cause before the Honorable Judge Linda Garcia, Judge Presiding, held in the County Criminal Court at Law No. 16 of Harris County, 1201 Franklin Street, Houston, Texas 77002.

Proceedings reported by computerized stenotype machine.

APPEARANCES

FOR THE STATE:

Ms. Sara Kimbrough
Harris County District Attorney
1201 Franklin Street
Suite 600
Houston, Texas 77002
Telephone: (713) 247-5800
Fax: (713) 755-1839
E-mail: sara_kimbrough@dao.hctx.net

FOR THE DEFENDANT:

Mr. James Fletcher
Tyler Flood & Associates, Inc.
1229 Heights Boulevard
Houston, Texas 77008
Telephone: (713) 224-4394
Fax: (713) 224-5533
E-mail: James@tylerflood.com

THE COURT: We're outside the presence of the jury. I understand based on -- Mr. Fletcher wants to make a motion to suppress?

MR. FLETCHER: Yes, your Honor.

At this moment, the Defense would move to suppress the blood in this case.

THE COURT: Okay. And do you have any witnesses on that motion?

MR. FLETCHER: We would call Dr. Fessessework Guale.

DR. FESSESSEWORK GUALE,

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. FLETCHER:

Q. Good morning.

A. Good morning.

Q. Can you please state your name and spell your first and last flame for the record.

A. Fessessework Guale, F-e-s-s-e-s-s-e-w-o-r-k; my last name is Guale, G-u-a-l-e.

Q. And how are you employed, Dr. Guale.

A. I am employed by the Harris County Institute of Forensic Sciences, in the toxicology section.

Q. And what is your job title in the toxicology section?

A. I am the toxicology analytical operations manager.
Q. So, it's part of your job responsibilities to oversee the testing of blood ethanol samples, right?
A. Correct.
Q. Okay. And your job is to make sure that the proper procedures were followed when a lab like yours is conducting blood ethanol testing, correct?
A. Correct.
Q. And you reviewed the -- the data in this case, correct?
A. Correct. I don't have the case file. It's with the analyst, because you're supposed to go to testify first.
Q. Sure. But you're responsible for supervising the data in this particular case, right?
A. Correct.
Q. Okay. And -- I just wanted to ask you a couple questions about -- you used a technique known as gas chromatography to analyze blood ethanol samples, right?
A. Yes.
Q. And basically, gas chromatography, or GC for short, is the science of separation, right?
A. Correct.
Q. What GC is, is you can analyze a sample for

volatile compounds and figure out what the concentrations of those compounds are in the blood, right?

A. Correct.

MS. KIMBROUGH: Your Honor, since his taking Dr. Guale as his witness, I just ask that he not lead her.

MR. FLETCHER: It's a motion to suppress.

THE COURT: It's overruled.

Q. (Mr. Fletcher) Basically what a GC does is you take a sample and it heats it up and runs it through a column which separates all the active volatiles and then they come out at the end and then you can tell what time they came out, right?

A. Correct.

Q. That's a real basic definition of what a GC does, right?

A. Correct.

Q. Okay. So, in your lab, you have what's known as standard operating procedures, right?

A. Correct.

Q. And those are written guidelines that dictate how blood ethanol samples are supposed to be run, right?

A. Correct.

Q. And people that work in your lab are guided by the SOP's, right?
A. Correct.
Q. And the SOP's dictate how the individual blood ethanol test is run in your lab, right?
A. Correct.
Q. And people are supposed to abide by the SOP's, right?
A. Correct.
Q. I mean, they're important enough to put into writing, right?
A. Correct.
Q. And the purpose of doing an SOP is to ensure that the science is accurate, right?
A. Correct.
Q. And another purpose is to assure that the science is reliable, right?
A. Correct.
Q. So, if you follow the guidelines sponsored by your lab, then you can come in here and say this is a valid sample, right?
A. Correct.
Q. Now, according to your SOP, when a person does a blood ethanol analysis, they have to do certain things before they can say that it's an accurate result, right?

A. They follow procedures.
Q. They follow the procedures --
A. Yes, sir.
Q. And those are things like sample preparation, right?
A. Yes.
Q. And making sure that the critical parameters of the machine are accurate, right?
A. Yes.
Q. And you have to do a whole bunch of checks and sequences before the machine is even ready to start doing a run, right?
A. Correct.
Q. And according to your SOP's one of those requirements is that the analysts run what's known as a calibration curve before each sequence, right?
A. Yes.
Q. Your own SOP's require that a calibration curve be conducted each time a blood analysis is done, right?
A. Right.
Q. And if a person were not to run a calibration curve, then that could be a big problem, right?
A. Without a calibration curve, you can't -- you can't come up with a number.
Q. Right.

A. So, it's important that you have a calibration curve.

Q. Because you have to -- basically, what the calibration curve is, for the Court's understanding, is you run a series of concentrations of ethanol through known standards in the machine and make sure that they come out at what you know them to be, right?

A. Correct.

Q. And there are a total of six points of calibration on the GC machine in your lab, right?

A. Correct.

Q. Okay. And you are required to -- the lab is supposed to print off each of the chromatograms for each point on the calibration curve, right?

A. Correct.

Q. And that way, you can tell whether or not what's being reported on the curve is accurate as to what came out on the chromatogram, right?

A. Correct.

Q. I'm going to show you what has been previously marked as Defendant's Exhibit 2.

Do you recognize what this is, Dr. Guale?

A. Yes. This is the calibration curve.

Q. That's the calibration curve for the sample in

this case, right?
A. Correct.
Q. And that was provided by your lab to me through the Court's discovery order, correct?
A. Yeah.
Q. Okay. And as far as you know, is anything -- is this a fair and accurate copy of the calibration curve that was done in this case?
A. If you can give me the data that's associated with it, because the dates maybe different.
Q. Sure. Okay. Let's do that.
Oh, and I forgot to ask: It's your standard operating guideline that you report the -- the concentration of ethanol to a third decimal place, right?
A. We changed it, yeah.
Q. Right. You report three, right?
A. Yeah.
Q. Because the machine will truncate it after three, so, you don't -- you don't round down after three, right?
A. No.
Q. But you do report three decimal places, right?
A. Yes. It used to be only two; but now, we are doing it three.

Q. Right. But according to your current SOP, you're reporting three.

A. Correct.

Q. All right. I'm going to show you what has been marked as Defendant's Exhibit 3.

Can you tell me, Dr. Guale, what this is?

A. This is a data that was generated from a .025 standard --

Q. Uh-huh.

A. -- which is actually right here.

Q. Okay. And that chromatogram that you have, Defendant's Exhibit 3, that's a chromatogram that's associated with the calibration curve, Defendant's Exhibit 2, right?

A. Correct.

Q. Okay. I'm going to show you what's been marked as Defendant's Exhibit 4.

Can you please tell the Court what Defendant's Exhibit 4 is?

A. It is a .050 standard, which is right here.

Q. Okay. And that chromatogram corresponds to the calibration that we're talking about, right?

A. Yes.

Q. Okay. I'm going to show you what's been marked

as Defendant's Exhibit 5. And this one's two sided.

Can you -- do you recognize what this is, Dr. Guale?

A. This is the .2 standard, which is right here.

Q. And that chromatogram is associated with the calibration curve on Defendant's Exhibit 2, correct?

A. Yes.

Q. Okay. And on the other side of Defendant's Exhibit 5, can you tell the Court what this is, please?

A. This is a .3 standard.

Q. Same question: That's associated with the calibration curve that we're talking about, right?

A. Yes.

Q. Okay. Last one. I'm showing you what's been marked as Defendant's Exhibit 6.

Can you please tell the Court what that is, Dr. Guale?

A. This is the .4 standard. And that's here.

Q. And that's also associated with the calibration curve, right?

A. Yes.

Q. Now, I want to ask you to -- for the Court's understanding, read off the calculated result for the .025 calibrator, please.

A. The .025?

Q. Right. What is the reported or the calculated grams per deciliter?
A. .025.
Q. Okay. And what is the calculated report on the chromatogram for that calibrator?
A. .024.
Q. Okay. Same thing with this Defendant's Exhibit 4: Can you tell the Judge what the reported or the calculated grams per deciliter is on the calibration?
A. .049.
Q. And what was the calculated value on the chromatogram associated with that?
A. .049.
Q. Okay. On Defendant's Exhibit 5, can you tell the Judge what the calculated grams per deciliter was on the calibration curve?
A. .198.
Q. Okay. And what is the calibrated value on the chromatogram?
A. .199.
THE COURT: I'm sorry, what's that number?
MR. FLETCHER: .199.
THE COURT: .199?

THE WITNESS: Yes.
THE COURT: And the first number was?
MR. FLETCHER: .198, Judge.
THE COURT: Thank you.
Q. (Mr. Fletcher) And can you tell Judge what the calculated grams per deciliter was for the .03 standard on the calibration curve?
A. The .3 is written .3.
Q. .3. And what does the chromatogram say for that?
A. .302.
Q. Okay. And last one, can you tell the Judge what the calculated grams per deciliter was on the calibration curve for the .4 standard?
A. .402.
Q. Okay. And can you read what the calculated concentration was for the chromatogram?
A. .401.
Q. Okay. Thank you.
Dr. Guale, would you agree with me that four -- excuse me, five out of these six chromatograms associated with this calibration curve report different value than what it reported on the curve, yes or no?
A. You must have another printout in there that you did not show me.

MR. FLETCHER: Nonresponsive, your Honor.

Q. (Mr. Fletcher) Would you agree with me that what we just went through, five of the six chromatograms do not match what was reported in the calibration curve?

A. Correct.

Q. Okay. And if you were to discover a problem with a calibration curve, you wouldn't report the result, right? You wouldn't sponsor the result, if you weren't sure that the calibration curve was done properly?

A. If those two numbers don't match, no.

Q. If they don't match, then you can't sponsor the result, right?

A. No. But I'm assuring you, there's another one included in there which matches.

Q. Do you have that with you?

A. No. You have it in your discovery.

MR. FLETCHER: I'll pass the witness, your Honor.

THE COURT: Ms. Kimbrough?

MS. KIMBROUGH: Brief re-direct, your Honor.

CROSS-EXAMINATION

MS. KIMBROUGH: Can I have those exhibits.

MR. FLETCHER: Sure.

Q. (Ms. Kimbrough) So, the differences in the numbers that we just talked about, do they indicate that the calibration on the instrument used in this case was done incorrectly?

A. Repeat your question again.

Q. Do the differences in those values that we just talked about indicate that the calibration that was done on this instrument used in this case was done incorrectly?

A. No.

Q. What does it indicate?

A. That indicates there was another calibration curve that was included in the discovery order that wasn't given to me, that means -- usually, when you come in in the morning, you had an instrument that ran yesterday.

So, when you are running your new standards and the calibrators, those numbers come out based on what the calibrator yesterday was.

So, what you do is once that's printed out, you ask the instrument to give you the calibration

based on those calibration points that you run today. So, you will have two printouts.

Q. Okay.

A. So, that's -- what I saw was we have had this before, in several cases where by rules --

MR. FLETCHER: Object to relevance.

THE COURT: Sustained.

Q. (Ms. Kimbrough) So, you're saying that there's another document that you've provided to defense counsel that shows that the calibration was done correctly, right?

A. Correct.

Q. And you asked and he refused to give it to you on the stand, right?

MR. FLETCHER: Objection, your Honor, that's not what happened.

THE COURT: Sustained.

Q. (Ms. Kimbrough) Did you ask to see that document?

A. I indicated that this is not -- there is another document in there that included all the points, the right points in the calibrator.

Q. Okay. And you stated earlier that you didn't bring a case file with you on this case?

A. No. It's with the analyst.

Q. Okay. And if the analyst were to arrive here in a couple of minutes with those documents, would you be able to find and refer to the document that you're speaking of that shows that the calibration of the instrument used in this case was done correctly?

A. In the -- we don't have those in the case folder, but they're in the discovery order. They're included in there.

Q. I'm handing you what's been previously marked as State's Exhibit 20.

Do you recognize this?

A. Yes.

Q. What is it?

A. It's a laboratory result on the laboratory analysis performed on Jose Luis Delacruz.

Q. And who is the expert reviewer listed on the bottom of that lab result?

A. It is Fessessework Guale. It would be me.

Q. Okay. And does your signature appear on it?

A. Yes.

Q. Can you tell me what your signature signifies on this document?

A. That means I am the expert reviewer. I looked at the whole case and I attested that the result is reliable. That's why I signed. My signature means this

is correct and reliable result.

Q. Okay. And in coming to that conclusion, would you have reviewed all the documents associated with the maintenance and calibration of this particular instrument?

A. That person would be Glenda Thomas. She is a technical reviewer. She reviews everything that's associated -- any data associated with this work, would be reviewed, the chain of custody and everything; and then she would put her signature here.

All the other data is correct. And the testing was performed and conducted according to the standard operating procedure.

Q. Okay. So, what do you look at to affix your signature on it?

A. I have to look at the data in the case folder.

The data in the case folder, there's a submission paper in there where; who submitted the samples, who signed it, and it was picked up by a person. I have to make sure this is the exact sample that was received, and I have to make sure -- I have to look at the chromatographic data and make sure that number that was on the chromatogram is actually here and that the units are correct.

Q. Okay.

A. And that's pretty much it.

I want to make sure that we have rules -- if the alcohol is for instance, less than .1, then I would have to send that for drug analysis. And all those are taken care of. This is greater than .1; so, it's good to go.

Q. So, based on your review of the records in this case, did you by signing that certify that the lab result in this case is reliable and performed subject to the protocol set out in your SOP's?

A. Yes.

Q. And based on the documents that have been placed in front of you by defense counsel today, does that alter your opinion regarding whether or not the lab results in this lab in this case are reliable?

A. No, it doesn't. I'm aware of what's included in this lab result.

MS. KIMBROUGH: Pass the witness.

THE COURT: Anything further, Mr. Fletcher?

MR. FLETCHER: Just briefly, your Honor.

REDIRECT EXAMINATION

BY MR. FLETCHER:

Q. Dr. Guale, earlier, you and I agreed that the chromatograms that I showed you were associated with the

calibration curve that I also showed you, right?

Those are the same chromatograms used to create that same calibration curve, yes or no?

A. No.

Q. They're not?

A. They're not.

Q. Even though you testified earlier that they were. You're changing it now?

A. No, I'm not changing it. I'm telling you that the one that you showed me, the curve says 6/22. I'm trying to associate those with that, but I'm aware of what's going on in the lab in the same day. So, you have two printouts. So, show me the other one.

MR. FLETCHER: Objection, your Honor, improper burden shifting.

THE COURT: Sustained.

Q. (Mr. Fletcher) Dr. Guale, I'm going to do this one more time.

This is the calibration curve you testified earlier associated with this case, correct?

A. I'm telling you --

Q. What is the date?

A. -- there is another one.

Q. What is the date on this calibration curve?

A. It's 6/22.

Q. Okay. And what is the date on this chromatogram?
A. 6/22.
Q. Okay. And what is the date on this chromatogram?
A. 6/22.
Q. And what is the date on this chromatogram?
A. 6/22.
Q. Same thing with the other side, what's date on that?
A. 6/22.
Q. And finally, that one. What's the date on that?
A. 6/22.
Q. Okay. So, it's fair to say that this calibration curve in these chromatograms were done on the same day, correct?
A. They're done on the same day, but there is another printout.
Q. You don't have that with you, do you?
A. No, I don't; but you have it.
Q. And you don't have any of the chromatograms associated with the report calculated concentrations on this curve, do you (indicating)?
A. I don't.

Q. I have that. I just showed them to you, right?
A. There is another one because I know what's included in the discovery order.
Q. You agreed with me earlier that these chromatograms are the ones that are associated with this calibration curve, isn't that correct?
A. Now I see they're not.
Q. Okay. But you testified earlier that they were.
A. Because I didn't know where you were going. I didn't know you were hiding some documents --
MR. FLETCHER: Objection, your Honor nonresponsive.
THE COURT: Sustained.
Actually, that's overruled. I think it is responsive. But it doesn't matter. It's to the Court.
Q. (Mr. Fletcher) And one last time, Dr. Guale, if you found out that there was a problem with the calibration curve on any given sequence, then you would not sponsor the result, isn't that correct?
A. Correct.
Q. Okay.
MR. FLETCHER: Pass the witness, your Honor.

RECROSS-EXAMINATION

BY MS. KIMBROUGH:

Q. And are you aware of a calibration problem with this instrument?

A. There is no calibration problem. It is a process.

Q. When you have --

A. And we have two printouts. And one is based on a calibration that was done yesterday and the other one is based on that calibration points. But they're going to printout, both of them, the same date.

Q. So, I've just received in my hand the case file from the analyst.

Would the documentation in this file assist you in further asserting your certification that the lab result in this case was reliable and subject to proper protocols?

A. It was done based on the standard operating procedure and as a result is reliable.

Q. Would there be anything in the analyst's case file that would further help you to confirm that?

A. You can give it to me. I can show you. (Reviewing).

Q. Is it possible that there are documents on this disc that are not in hard copy on the file?

A. Yeah. All that document is, every data that's associated with this run.
Q. Okay.
A. This case folder is only the result and is a submission.
Q. Okay.
A. So, the only thing is, you know, there is a date and the time that the sample was run and the date that, you know --
Q. So, there's no hard copy calibration records in this case?
A. No.
Q. Would there be on this disc?
A. Yes.
MS. KIMBROUGH: Your Honor, may we have a brief recess to pop this in so that she can tell me what document she's referring to so that we can provide that to the Court?
THE COURT: Sure.
(Recess taken)
THE COURT: We're back on the record.
BY MS. KIMBROUGH:
Q. While we were on recess, did you have the ability --
While we were on the break, you were

about to review the entire case file associated with this lab; is that correct?

A. Correct.

Q. And while we were reviewing that, did you come across any documents that you found would be helpful to your determination specifically whether the calibration of this instrument was done properly?

A. Correct.

Q. What documents generally did you come across?

A. I came across the document that I asked the defense counsel to give to me, and it's right there.

Q. Okay. And specifically, this is 13 pages of documents that were, amongst several other documents, provided to defense counsel at discovery; is that right?

A. Correct.

Q. By your office?

A. Correct.

Q. And so, I'm about to come up and hand you State's Exhibit 23 through 38; and I'm just going to ask you -- can you tell me what State's Exhibit 23 through 38 are?

A. This is a calibration curve, which have the same June 11 date, and all the associated chromatograms generated using that curve.

Q. And the documents represented in State's 23

through 38, do they represent a complete rendering of the calibration protocols that were followed regarding the instrument that was used to test this blood in the case?

A. Correct.

Q. And if you've had time to review those while you're on the witness stand, can you state -- does the information in that document support your earlier conclusion that the blood results in this case were reliable and were reached after following the protocol set out in your standard operating procedure?

A. Correct.

Q. Okay. Is there a specific document in there that you would point to for that conclusion? If not, that's okay, but if there is one.

Is there a specific document that you were referring to that you didn't get on direct examination with defense counsel?

A. Yeah, these chromatograms.

Q. Okay. Which one specifically, in terms of exhibit number?

A. I have to see what he showed me before, because there are several of them.

Q. So, I'm also handing you Defense 2, 3, 4, 5, and 6.

A. Okay.
Q. Just kind of keep these with you.
So, is Defense 2 the same as State's 23?
A. This one goes with this.
Q. Oh, you've got to refer to them by exhibit number.
A. Okay. Twenty-three.
Q. State's 23.
A. And this one, which is 24 matches what's on the 23.
Q. So, just so we're clear, these are Defense Exhibits. 2, 3, 4, 5 and 6 with the blue sticker are Defense Exhibit. The ones with the white stickers are State's Exhibits.
So, you said State's Exhibit 23 is a duplicate of what in the Defense Exhibit?
A. Okay. I need to get -- this initial is KP.
Q. Okay. What's that initial?
A. That's the analyst's initial, which she's not here. And this one, under Salazar, 11/26. (Reviewing).
Okay.
Q. I guess what I'm trying to ask is: How do we ensure the Judge that we followed the standard operating procedures regarding this lab?
A. How do we ensure?

Q. Uh-uh.
A. All the documents are really here.
Q. And can you personally testify that the standard operating procedures were followed in this case?
A. Yes.
Q. And that's your testimony under oath?
A. Yes.
Q. Under the penalty of perjury?
A. Yes.
Q. Okay. And are you as the -- tell me what your full title is again.
A. Analytical operations manager.
Q. Okay. And -- what qualifications do you have to go through to hold that title?
A. Oh, I have almost 25 years of experience working in the lab, in toxicology lab, and I do have a managerial and supervisory experience, plus I do have a specialized training. I hold a master's degree in toxicology.

So, when you do specialized --

MR. FLETCHER: Your Honor, we'll stipulate for this hearing that the witness is an expert.

THE COURT: Okay.

MS. KIMBROUGH: I was just trying to get through that the witness is qualified to make that determination that the standard operating procedures were followed in this case.

Is that what you're stipulating to?

MR. FLETCHER: Just that you don't have to build up her qualifications or anything.

MS. KIMBROUGH: Okay.

MR. FLETCHER: I stipulate for the purposes of this hearing that the witness is an expert.

MS. KIMBROUGH: Let me be clear so that I know I do not have to go further: You're stipulating that she's qualified to testify regarding the fact that the standard operating procedures were followed in this case?

THE COURT: Yes. Ms. Kimbrough, we've already agreed that she's an expert.

MS. KIMBROUGH: Sure.

Pass the witness, Judge.

FURTHER REDIRECT EXAMINATION

BY MR. FLETCHER:

Q. Dr. Guale, I'm going to ask you the same sort of exercise that we did before.

Can you tell me, please, on the calibration curve dated for June 11th, can you read to

the Court what the calculated result was for the .05 calibrator?

THE COURT: But we've been through this before, Mr. Fletcher.

MR. FLETCHER: This is a different chromatogram.

THE COURT: It's a different chromatogram?

MR. FLETCHER: It's a different calibration curve.

THE COURT: For the 05?

MR. FLETCHER: For the 05.

Q. (Mr. Fletcher) Can you read out the calculated grams per deciliter for .05 calibrator?

A. .048.

Q. Okay. And can you read for the Court, the calculated amount on the chromatogram associated with that same calculator?

A. .047.

Q. And can you read for the Court, the reported value on the calibration curve for the .10 calibrator?

A. .1.

Q. And can you read for the Court, the corresponding chromatogram value?

A. .099.

Q. All right. And can you read for the Court, the calculated result on the calibration curve for the .03 standard?
A. .298.
Q. And again, can you tell the Court what the calculated value on the chromatogram was?
A. .297.
Q. Okay. And last one, can you tell the Court what the reported value on the calibration curve was for the .04?
A. .402.
Q. And same thing, can you read the calculated value on the chromatogram?
A. .401.
Q. Okay. So, would you agree with me, Dr. Guale, that on four of the calibrations used for this calibration curve, the reported values are different than those that came out on the chromatogram, yes or no?
A. Correct.
MR. FLETCHER: Pass the witness, Judge.
THE COURT: Anything further, Ms. Kimbrough?
MS. KIMBROUGH: Nothing further, Judge.
THE COURT: I have a question, Doctor. Dr. Guale, how closely do the

calculations have to match before you can rely on the results -- the testimony that Mr. Fletcher has elicited, is that enough of a difference to make a difference in the outcome of the sample?

A. No.

Sometimes, the numbers would get truncated and they show up in there.

THE COURT: Okay. Thank you.

Anything further for this witness from either side?

MR. FLETCHER: Just one question.

THE COURT: Okay.

FURTHER REDIRECT EXAMINATION

BY MR. FLETCHER:

Q. Dr. Guale, would you agree with me that the results that are reported on the chromatograms for both calibration curves, there are at least ten different values than what are reported in the chromatograms?

A. They are not ten different values.

Q. Okay. There were six, excuse me, five on the first one and four on the second one, correct?

A. Correct.

Q. Okay. So, we have nine reported values on the calibration curve that are different from what the chromatogram say, right?

A. Correct. And these are two different runs.
Q. Right. One is the initial and one is the confirmatory one.
A. One is the initial and the other one is the confirmatory one.
Q. But your SOP's call for running a calibration curve on either one, correct, before you start, right?
A. Yeah.
Q. Okay. And you don't have any chromatograms with you that show the reported values on the calibration curve for either one, right?
A. You mean with me?
Q. Yeah.
A. For the case or for the --
Q. For the calibration curve, you do not have with you chromatograms reflecting the report -- the values issued on the report, right?
A. Yeah. These are right here. Right now, we have them.
Q. But we just went through that there's nine different ones that you don't have chromatograms for?
A. They're not different.
Q. They're different than what was reported.
A. Just that the -- that's in the same chromatogram. You have it here. They're the numbers.

The third digit is -- the third decimal digit is different.

Q. Right. And it's your lab's SOP to report to three digits, right?

A. Correct.

Q. Okay.

MR. FLETCHER: Pass the witness, your Honor.

MS. KIMBROUGH: Nothing further, Judge.

THE COURT: Okay. You can step down, Dr. Guale.

I'm going to deny the Defendant's motion to the suppress on the basis that I believe that the problems brought up in the motions go to the weight, not the admissibility of the evidence.

Bring the jury back.

THE COURT: Does anybody have anything we need to take up with the Court before we bring the jury back in.

MR. FLETCHER: Just that -- I forgot to mention this earlier -- during my motion to suppress for the blood, I intended to make the argument that the State haven't met their burden under *Kelly v. State*, specifically the third prong, based on the witnesses testimony; and I forgot to make that argument after you had made your rulings. I just wanted to get that on the record that that's what I intended to argue.

THE COURT: I'm glad you brought that up. Let's address that.

Because we had had the jury for quite a bit of time at the time, I didn't really give chances to argue that.

So, if you would like to say a few words about that motion at this time -- so, you're saying that they didn't meet their burden under Kelly?

MR. FLETCHER: Right.

The argument is, Judge, that the State is required to show by a clear and convincing evidence to the Court as the gate keeper under Kelly v. State for the proponent of any scientific evidence, and the State bears the burden of introducing the contested evidence;

specifically, the blood in this case.

And the argument would be from the Defense is that the State's expert witness testified that the -- that it's very important to do a calibration curve before you do any sort of blood analysis and you have to follow the standard operating procedures.

And if you don't, if you don't have a proper calibration, then the result can't be sponsored because we don't know if the machine was accurate or not. And in this specific case -- and I don't know how this happened, I'm not guessing one way or the other, but the fact is that the calibration curve, in my opinion, has some major issues with its -- specifically that the levels reported on the curve itself do not coincide with what was actually produced in the data, in the chromatograms.

And we would argue that the State can't meet their burden under the third prong of Kelly because the calibration curve is inaccurate. What's reported was not what was actually conducted. And therefore, if the calibration curve is inaccurate, then the result itself is inaccurate; and therefore, the State can't meet their burden under Kelly.

THE COURT: Thank you.

Do you have any response?

MS. KIMBROUGH: Just to point out that Dr. Guale testified actually in response to a question by the Court that the variation between those numbers did not mean that the calibration was done incorrectly.

They were, at the most, you know, two thousands of a point different and she testified that she stood behind the reliability and accuracy of the lab. She's a duly qualified expert, as was stipulated to by counsel, and she also testified regarding the reliability of the lab itself as well as the underlying methodology under 702.

THE COURT: Okay.

So, your objections and your arguments now are noted for the record; and the motion is denied.

(Proceedings Concluded)

STATE OF TEXAS

COUNTY OF HARRIS

REPORTER'S CERTIFICATE

MOTION TO SUPPRESS HEARING

July 19, 2016

I, Mubarak Oladejo, Official Court Reporter in and for the County Criminal Court at Law No. 16 of Harris County, State of Texas, do hereby certify that the above and foregoing contains a true and correct transcription of all portions of evidence and other proceedings requested in writing by counsel for the parties to be included in this volume of the Reporter's Record in the above-styled and numbered cause, all of which occurred in open court or in chambers and were reported by me.

I further certify that the total cost for the preparation of this Reporter's Record is $_____ and was paid/will be paid by _____.

/s/ Mubarak Oladejo

Mubarak Oladejo, CSR
Texas CSR 9224
Official Court Reporter
County Criminal Court
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1201 Franklin Street
Houston, Texas 77002
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Expiration: 12/31/2018

EXHIBIT #4

REPORTER'S RECORD
VOLUME 1 OF 1 VOLUMES
TRIAL COURT CAUSE NO. 1999133

THE STATE OF TEXAS	)	IN THE COUNTY CRIMINAL
	)	
	)	
	)	
vs.	)	COURT AT LAW NUMBER FIVE (5)
	)	
	)	
DANIEL BRYANT IMRECKE	)	HARRIS COUNTY, TEXAS

EXCERPT TESTIMONY

On the 27th day of January, 2016, the following proceedings came on to be held in the above-titled and numbered cause before the Honorable Margaret S. Harris , Judge Presiding, held in Houston, Harris County, Texas.

Proceedings reported by computerized stenotype machine.

APPEARANCES

Ms. Maegan Latrice Williams
SBOT NO. 24088647
Mr. Gilbert Goss Sawtelle, IV
SBOT NO. 24073611
Harris County District Attorney's Office
1201 Franklin
Houston, Texas 77521
Telephone: 713-274-5800
Attorney for The State of Texas

Mr. Tyler Ashley Flood
SBOT NO. 20432057
Tyler Flood & Associates, Inc.
1229 Heights Blvd.
Houston, Texas 77008
Telephone: 713-224-5529
Attorney for Daniel Bryant Imrecke

VOLUME 1

EXCERPT TESTIMONY

January 27, 2016

ALPHABETICAL WITNESS INDEX

EXHIBITS OFFERED BY THE STATE

EXHIBIT	DESCRIPTION	OFFERED	ADMITTED	VOL.
A	Retrograde Alcohol Extrapolation Report	16	18	1
19	PowerPoint - Alcohol Analysis by GC Headspace	63	63	1
20	HCIFS Laboratory Report	77	138	1
21-26	HCIFS Gas Chromatogram	109	109	1
22	HCIFS Gas Chromatogram	162	162	1
22	HCIFS Gas Chromatogram	162	162	1
26	HCIFS Gas Chromatogram	162	162	1
24	HCIFS Gas Chromatogram	162	162	1
25	HCIFS Gas Chromatogram	162	162	1
26	HCIFS Gas Chromatogram	162	162	1

EXHIBITS OFFERED BY THE DEFENSE

EXHIBIT	DESCRIPTION	OFFERED	ADMITTED	VOL.
3-9	HCIFS Gas Chromatogram	83	83	1
3	HCIFS Gas Chromatogram	143	143	1
4	HCIFS Gas Chromatogram	143	143	1
5	HCIFS Gas Chromatogram	143	143	1
6	HCIFS Gas Chromatogram	143	143	1
7	HCIFS Gas Chromatogram	143	143	1
8	HCIFS Gas Chromatogram	143	143	1
9	HCIFS Gas Chromatogram	143	143	1
10	HCIFS Gas Chromatogram	143	143	1
11	Chart	98	98	1

THE COURT: Raise your right hand.

(Witness sworn)

THE COURT: Great. Come on up here. We're going on the record, outside the presence of the jury, in the State of Texas versus Daniel Bryant Imrecke, on a Gatekeeper Hearing with regard to certain testimony of this witness that's being proposed by the State.

Ms. Williams, please proceed with regard to this scope. Thank you.

MS. WILLIAMS: Yes, Your Honor.

FESSESSEWORK GUALE,

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MS. WILLIAMS:

Q. Could you please introduce yourself?

A. My name is Fessessework Guale.

Q. And what is your occupation?

A. I'm a forensic toxicologist.

Q. What are some of your responsibilities in that position?

A. I work for the Harris County Institute of Forensic Sciences. I am the Analytical Operations Manager of the toxicology section. I manage the day-to-day activities of the lab; I supervise the

employees. I make sure the cases that we received took the regular testing dictated by the SOPs, and I make sure all the work is done, and the case is signed out.

Q. Okay. And how long have you been so employed?

A. Nine years.

Q. And so, what type of background do you have -- scratch that.

What type of educational background do you have?

A. I have a degree of the Doctorate of Veterinary Medicine, and I also have a Master's Degree in Toxicology. And I'm double-board certified, one, by the American Board of Veterinary Toxicology; and another one by the American Board of Forensic Toxicology.

Q. And in your current position, have you had an opportunity to participate in any studies or to publish any of your own work?

A. Yes, I have published.

Q. And would you mind describing some of those publications, and what they were regarding?

A. The latest -- the previous one, it will be -- I have a couple of publications on Method

Development, that means analytical methods, how to do testing. And then latest published method that I have is Screening Method for Designer Drugs Using State-of-the-Art Instruments such as TOF.

Q. Okay. And so, let's discuss a little bit about blood analysis. What role do you play in regards to blood analysis, in terms of the alcohol -- I'm sorry, the ethanol concentration?

A. We do have a lot of internal trainings and external trainings about, you know, alcohol analysis; what are the commonly, you know, state of the art methods that we employ in our laboratory.

We use gas chromatography, which is the latest -- or the standard for alcohol. And we implement the latest method. And we do have a high standard of quality because we're accredited by two accreditation boards, that we're required to perform certain standards, which is the highest standard, and we implement those.

And we do train our analysts very well, and they are competent in performing the job. They do have an excellent proficiency to do; internal proficiency to do, and they are very competent individuals. And we stand by our work, with the high-quality work.

Q. Okay. And so you mentioned the individuals who do the actual analysis, as far as -- so you have your analyst do the analysis, what role do you play in regards to that?

A. Mostly in the training. I write the SOPs, The Standard Operation Procedures, and train analysts.

Q. Okay. And so, throughout your training and through some of your research and experience, did you receive any training or education regarding the impact of alcohol on the body?

A. Yes.

Q. And what kind of training and education have you received on that subject?

A. When you do -- when I was in veterinarian college, we do have a course, a toxicology course. And that course -- in that course, you learn about the effects of drugs, chemicals, everything, including air and the water. And when you do a Master's in Toxicology, you're focusing on the toxicity of every drug and alcohol and intoxicants in the environment, and every intoxicant which is on the face of the earth. So, one of them is alcohol, which is actually a C-plus chemical on earth. So, I learned -- or we learned deeply about the effects of

alcohol, then, when I was doing my master's. And, actually, on the workforce, that's practically applying what I learned there.

Q. Okay. And so, in your experience is there -- we understand that when you're analyzing the blood for ethanol, that analysis is done from the time of the blood draw. Is there any way to determine what that individual's ethanol level or blood-alcohol concentration may have been at the time that they were driving?

A. Yes.

Q. And what is that called, or how do you do that?

A. It's called "extrapolation." So, the first thing that you need is all their information. The first thing in your alcohol analysis -- or you have to know what level of alcohol is in that person's blood at a certain time. And then, for that, you need the demographic information of that person; that includes weight, height, the gender -- male or female. And then, whether they ate or not ate that day, all those informations are vital. And you just plug that into a formula, which has been established since long time ago.

Alcohol has been studied for more than

a hundred years. There's a formula derived -- a published extrapolation formula, you plug that information in that formula, and then the formula will tell you -- or calculate it for you, at what time and what level the alcohol would be in the person's system.

Q. And so, you mentioned some of these publications, and you described that there's a formula. Can you explain to us a little bit more about that formula and, kind of, how it works in determining -- you gave it to us, you know, broad, but just -- can you describe the formula a little bit more?

A. The original formula -- all the other, you know, little formats are done; it's called "The Widmark Formula." And that's, actually, it's a pharmacokinetic study. The way they study it is, they will give a person a certain amount of alcohol, and then they will monitor how much would be in the system by taking the blood at the certain period of time, and then make a calculation. You know, how much is absorbed, and how much is eliminated at what rate. So, that formula is derived from experimental studies so that we can use it now.

Because as any medication or as any

food or beverage that you are taking in, the body is going to absorb it, like, alcohol is going to be absorbed. The body will be absorbing it, and it will be distributed all over your body through the blood. And then, once it's distributed through the body, and then, it goes through metabolism, that means it changes by the liver. The liver has got enzymes to break the drug down. And then, it will eliminated at a certain rate by, you know, urine and breath and other sources of elimination.

So, all these are a hundred year's worth of experiments to derive that formula. And so, you just plug in the weight and all the demographic data and the times, and it will calculate it for you.

Q. Okay. And so within your agency, once you receive that information, you mentioned you plug it into something?

A. Yes.

Q. And what is that program called?

A. There's a software called "BAC-Tracker Software," where all these intricate formulas are put together so that the user can just put that information in. It's a very simple arithmetic. Like, it's just like using a calculator. You know, the formulas are plugged into the calculator, and the

software has got those formulas plugged in in there, and the software just calculates it out for you. But you have to put the information that needs to be put in. So, that's a software that we use instead of using a manual calculation and taking a lot of time. The software just calculates it for you; so, we call it BAC-Tracker.

Q. Okay. And so let me give you a hypothetical --

A. Okay.

Q. -- so we can test this. And I believe you mentioned you needed some variables?

A. Yes.

Q. And amongst those variables, do you need weight?

A. Weight, height, gender, what time the person start drinking, and what time the person stopped drinking. What time was the blood draw, whether the person was eating or no eating, when you know, drinking, and what time of the incident.

Q. Okay. So, let me give you a hypothetical now. I have a male about, maybe, around age 30, 180 pounds, six feet. The time of the blood draw was at 2:36 a.m. The time of the stop was at 1:41 a.m. The breath results -- sorry, the time of the first drink

was 6:00 p.m.; the time of the last drink was 12:00 a.m. and the blood-alcohol concentration was a .136. Given that information, would you be able to make an educated determining of what the extrapolation could be?

A. Yes. Can I have my copy?

MS. WILLIAMS: Your Honor, may I approach the witness?

THE COURT: Yes.

Q. *(BY MS. WILLIAMS)* All right. So I have here what's been marked for demonstrative purposes as State's Exhibit No. 5.

THE COURT: Excuse me, you already have a State's Exhibit No. 5 in evidence. And so, why don't we give it a different number, if you'd like, an "A," a letter, so that we know to distinguish it.

A. So, based on the information that you --

MS. WILLIAMS: Okay. So, it's going to State's Exhibit A?

THE COURT: Yes.

Q. *(BY MS. WILLIAMS)* So, you have in front of you State's Exhibit A marked for demonstrative purposes. Do you believe this would aid the Court in understanding what you're about to explain?

A. Yes.

Q. Okay.

MS. WILLIAMS: Your Honor, at this time, I would like to move that State's Exhibit A be introduced into evidence for the purposes of this hearing.

THE COURT: All right. So, are you going to show it on the overhead or what?

MS. WILLIAMS: Yes, Your Honor, I'll show it on the overhead.

THE COURT: Okay. Is there any objection for purposes of this hearing?

MR. FLOOD: Well, I'd object because it's based on information -- two objections. One, it's based on information that's not presented in evidence. Specifically, the height and the weight of the individual, which are factors that the witness said she needed to make this calculation.

And two, that when asked if she could make this calculation, she needed to look at the computer program printout in order to do so. And, I think, the purpose of this hearing is to question the witness' personal knowledge and ability to be able to do it and explain it to the Court and not rely on a computer-generated printout. But my main objection

is, this is assuming hypothetical facts that were not admitted in evidence.

THE COURT: And to that objection your response is?

MS. WILLIAMS: Your Honor --

THE COURT: I didn't recall that testimony either.

MS. WILLIAMS: Your Honor, we were using this solely as a hypothetical to explain the science behind the retrograde extrapolation. And so, right now, it's solely a hypothetical.

THE COURT: Okay. Let me ask this: If we don't have that in evidence -- and I'm guessing the analyst and this witness don't know the defendant to be able to give that information, how is this relevant in our trial?

MS. WILLIAMS: Your Honor, the officer, is currently on recall. And so, we would need to recall the officer to have that testimony entered on the record.

THE COURT: The officer's here?

MS. WILLIAMS: I can get him here.

THE COURT: Well, considering we're supposed to be starting with the actual trial in front of the jury right now unless he's here when the

jury comes out, it's not going to work out so well for you.

For purposes of this hearing, just to try to move forward, I'll allow this exhibit. But I can promise you, that if you're not able to prove up the *Mata* factors, then, it's not coming in.

MS. WILLIAMS: Yes, Your Honor.

THE COURT: All right. Proceed, please.

MS. WILLIAMS: Your Honor, I have an additional copy of that report, would you like me to publish the actual State's Exhibit A or use a duplicate?

THE COURT: Yes, I would.

MS. WILLIAMS: May I approach the witness?

THE COURT: It doesn't matter, either one. Just -- let's go.

MS. WILLIAMS: Okay.

Q. (BY MS. WILLIAMS) All right. Dr. Guale, can you please -- you mentioned that you entered it into a program called "BAC-Tracker"?

A. Yes.

Q. And that offers you an analysis of what the potential breath -- blood-alcohol concentration could

have been at the time of driving?

A. Yes.

Q. Can you please point to -- using the exhibit -- point to where that is on the exhibit?

A. It's right here (indicating). BAC at grams per deciliter at the time of interest, which is 1:41. The BAC would have been .152 with a range being 0.012 of uncertainty.

Q. Okay. And --

THE COURT: What is the last part?

THE WITNESS: This is a range plus/minus the .152. So, to give with that certainty, it could be plus 152, 0.012, or minus 0.012. So, it's giving you a range. It's not a single point. It's giving a range plus/minus .012.

Q. *(BY MS. WILLIAMS)* Okay. And so -- now that we're able to look at this document, you mentioned certain formulas were mentioned to make this determination. As far as this analysis, what formulas were used?

A. For this one, I used all the formulas, that's the standard way of doing it. To give the defendant the benefit of the doubt, you use all formulas, and that would increase the uncertainty. That way, the range will be bigger. So, I used all

these, six formulas.

And the difference is really, really very small. But, you know, when this comes to the numbers, it may be significant. So, I used all these formulas, and the software uses the uncertainty with each formula and gives you the range.

Q. And you mentioned that you used all the formulas?

A. Yes.

Q. And what does that mean in terms of how this number came be -- does it mean that each formula is different, or is there a certain constant that's different amongst the formulas?

A. Yes. The constant amongst the formulas is probably the first -- the Widmark would use only the weight, but the other would consider, you know, the sex. And the other one would consider the body mass index, which is different from using a weight. The other one will put the body mass index, and the differences are listed here, actually. If you look at them, right here (indicating) are the differences.

So, in the Widmark, the volume of distribution is .68; the Watson is .67; the Forrest .72; the Seidl is .77; the Ulrich is .74, these are the differences. And Posey-Moz one, is the latest

one where it becomes .718.

So, if you look at this, the difference is very very small, but when you increase the variables, your uncertainty becomes larger. That means you get a very large range, which gives, you know, the benefit of the doubt larger, not smaller. If I use only one, the uncertainty would be narrower. So, this is to give the benefit of the doubt for the defendant. Use six formulas; have a larger range, and see where the extrapolation comes in.

Q. Okay. And so, the formula that the BAC-Tracker uses uses all those formulas?

A. Yes.

Q. Why does this program use all of these formulas instead of choosing one or the other?

A. The same reason I exactly say, because to increase all the variables. Like, everybody is different: the weight is different; the body mass index, because of the proportion between fat and water in your body that comes, you know, the six differences. And all the other variables are included in here; so, there's no variable untouched. That's why, you know, it's better to use all of them -- to include all of the variables.

THE COURT: Excuse me. I have a

question. I'm just going to jump in.

How can you use the one that requires the BMI, since we don't have that?

THE WITNESS: It's from the weight.

THE COURT: It guestimates it from --

THE WITNESS: From the weight, yes. That formula has got a factor to give a range of BMI for that weight. So, that's one of the formulas that included in there.

THE COURT: So, even though others include the height and weight, that one then makes a guesstimate from those?

THE WITNESS: From the formula.

THE COURT: And which one is that?

THE WITNESS: I think it was Seidl that would have the BMI measurement. I have the scientific published paper that I just give to counsel.

THE COURT: Okay. If we gave you a calculator, would you be able to do one of those equations with the information you're given without using BAC-Tracker?

THE WITNESS: I could only assume elimination. I could plug in this number and calculate to backtrack the number.

THE COURT: No, not using this.
THE WITNESS: Yeah, I can do manual calculation using this formula.
MR. FLOOD: Judge, just to clarify, we had a conversation in the back. Her calculations -- and correct me if I'm wrong -- are based on Mr. Imrecke already being in the elimination phase. And one of the other variables is very important is the time of eating and what was eaten. The testimony was only: he had lots of chips and some sandwiches. So, even if the officer's brought back, they're not going to be able to fill in that factor. And she's included a 27-minute time of absorption.
THE COURT: Is this an objection or --
MR. FLOOD: I just -- I have this --
THE COURT: You will get to cross.
MR. FLOOD: It's a question, though, that she told me she can use the formula assuming elimination; but cannot calculate it without BAC-Tracker if he was still in the absorption phase. And that's why -- it just helps save time because she -- so -- I mean, I guess, I'll just stick with cross.
THE COURT: I am curious, because, at one point, I wrote down that it was important -- and I remembered this anyway -- to know what they ate and

when; is that correct?
THE WITNESS: Yes, you can plug in this.
THE COURT: What if we don't know?
THE WITNESS: You take an average. If you don't know, you take an average.
THE COURT: An average of what?
THE WITNESS: There are absorption constants that are plugged into the formula.
THE COURT: So, we're supposed to assume something so we can get a range.
THE WITNESS: Yes. Like for instance --
THE COURT: Excuse me. Which is exactly what *Mata* says you can't do, isn't it?
MR. FLOOD: That is correct, Judge. Can I just read you that one section?
THE COURT: No, I remember it. I'm asking them.
MR. FLOOD: That's correct, Judge.
THE COURT: It sounds like your witness is doing, precisely, what *Mata* told us that we cannot do. And that's, guesstimate an average. Have y'all read that recently? maybe? *Mata*?

MR. SAWTELLE: I've read it.

THE COURT: Recently?

MS. WILLIAMS: Your Honor, with regard to the constant, right, whether the slow or fast absorption rate -- you're asking us whether she can guesstimate that average; is that what the question was?

THE COURT: I don't want guesstimations. I want a scientific calculation based on factors that our higher courts have told us are required before we're allowed to do this. And my recollection is that the whole issue in this -- am I remembering that the analyst was named McDougall or something --

MR. FLOOD: That's correct.

THE COURT: Yeah, that's it. -- and he testified to, Well, depending on these things that I don't know, it could be anywhere from this to this. And they said you can't do that under our law. And they would not allow it. And they set out the factors that are required.

And that's why I'm asking y'all if you've read *Mata*, recently, before this hearing?

MS. WILLIAMS: No, Your Honor, I didn't. But I was asking in regards to the constant.

THE COURT: I got that. And, yet, I'm stuck on my issue here. And this is what y'all are going to have to answer to get past this hearing. I'm trying to help you out by pointing to where I'm having a difficulty. So, I'm going to take a couple minutes of recess and ask you to read *Mata*. You can borrow this one, and I'll look at my copy.

Do y'all want to read this? I'm offering it to you.

MR. SAWTELLE: We have it.

THE COURT: Perfect.

MR. FLOOD: May I say one short thing with respect to *Mata*?

THE COURT: If you must.

We're on the record, folks.

MR. FLOOD: There's an interesting piece of language in there talking about averages and absorption rates. And it says absorption and burn-off rates are highly variable in each individual. The, generally, accepted burn-off rate is about one beer per hour -- and it quotes, "average man." And *Mata* states, "However, the 'average man,' like, the average family with 2.4 children doesn't" --

THE COURT: Are you pointing out "one

little thing," or giving an argument? Because it sounds, suspiciously, like an argument. So, I'm to ask you to hold onto that.

MR. FLOOD: Okay.

THE COURT: And I don't want conversation in this courtroom right now. I want them reading this case so they can answer my question.

MR. FLOOD: Yes, ma'am.

(Brief pause)

THE COURT: Have you had a sufficient opportunity of time to read this now?

MS. WILLIAMS: Yes, Your Honor. And before I discuss it -- quickly clarifying your concern so I can make sure that I understood it. Your concern was: Regarding the *Mata* facts, and whether or not the expert should be allowed to make estimations as to those factors?

THE COURT: Correct.

MS. WILLIAMS: I understand.

In regards to the weight and height, right now we wouldn't be able to give that in terms of trial unless the deputies were given the opportunity to come back. In terms of this hearing, in the hopes that they will get time to get back --

THE COURT: Why don't you ask the expert about those *Mata* factors, and whether she agrees if they're important.

MS. WILLIAMS: Yes, Your Honor.

Q. (BY MS. WILLIAMS) Let's discuss some of the factors and variables that are necessary to make a determination of whether you can extrapolation. Let's discuss the length of time and the time of the offense, is that something you find important?

A. Yes.

Q. Okay. And why?

A. The incident time and the time of the blood draw, we're talking about?

Q. Yes, ma'am.

A. So that is what's -- both are important for the calculation to work. Because you have a certain amount of alcohol at a certain amount of time, that's what the software uses to back extrapolate to the incident time, using also the first drink and the last drink; and it just makes a curve of those values and to see where that would be, whether that person was absorbing, would be absorbing, or eliminating. So, it will calculate that. So, it's very important for those points to be made. Otherwise, it will not work.

Q. Okay. As far as this extrapolation, were you given that information?
A. Yes.
Q. And let's discuss some other individual characteristics. Is it important to know the subject's weight?
A. Yes.
Q. And why?
A. Because the formula uses the weight in the distribution factor to see how the dose will be distributed at a given time. So, you have to have the weight plugged there, without the weight information the formula would not work.
Q. Without the weight information, why wouldn't the formula work?
A. Because of -- depending on -- alcohol distributes throughout your body depending on your weight and the amount water and the fat quality. A person who is drinking one drink and is a very small person, the alcohol is going to be distributed in a very small area. So, the concentration would be higher as compared to the person who drink one drink and then the alcohol is distributed all over that area, and the concentration would be small.
So, it would not be fair to assume a

small person and a large person would have the same concentration at the given time. So, the formula has to have that weight to determine at one time, that the alcohol concentration would be, that depends on the weight.
Q. Okay. And what about how much somebody has eaten, is that considered an important factor?
A. It is an important factor, in a sense. If you eat food, and it is actually absorbed -- and it is the type of food that you eat, can slow the absorption. Like, it's not the same as drinking alcohol on an empty stomach.
Like, if you eat steak, for instance, it's very proteinous. It's very areawide; it sits there in your stomach. So, the alcohol with that steak is not going to be moving into the intestines, as fast as the empty stomach with only the alcohol, that moves faster into the intestines.
So, that's what the difference is. Because it has to compete for absorption, you know, site. That's why it's a smaller moving -- or emptying. Your bowel empties that slowly, because it has to digest that meat; and at the same time, the alcohol is still in there. So, that's why it slows the absorption. So, at a given time, if a person

drinks a drink, one drink, without food it will go, probably, 30 minutes.

Within 30 minutes, that alcohol would be absorbed. But if a person just had steak before he drinks, it may take an hour or an hour and a half for that alcohol to be absorbed into the system. So, it's very important to have that fact.

THE COURT: Let me ask a question: So, if you don't know when someone ate food and what they ate at that time, it affects your ability to accurately extrapolate?

THE WITNESS: If you know exactly, the software allows you to put that information. If you know exactly what time, you can put that information.

THE COURT: No, that's what I'm telling you: If you don't know those things.

THE WITNESS: If you don't know the time or the steak, then, you just have to use the average.

Q. *(BY MS. WILLIAMS)* And by average, you're referring to the constant we see at the bottom?

A. Yes.

Q. That slow absorption rate and that fast absorption rate?

A. Yes. This is the slow absorption rate.

This is the factor that the computer will use. And fast absorption rate, this will be at 6.5. But this is -- you can put one, up to eight in here (indicating) for -- if you have some information, and you know for sure the person ate a steak before the alcohol -- or while he's drinking, you can put one here (indicating) and one here (indicating), and calculate the whole thing with a slow absorption. And -- or you can choose, depending on the information you have.

Q. Okay. And so to clarify, that means you do need to know that they ate?

A. Yes.

Q. But do you need to know, necessarily, need to know the exact time to use your calculation?

A. Not really. It's during the course of, you know, your drink you can either have it at the beginning or at the middle. It will not have that much of a significance, as long as they're eating, you know, the absorption is going to be slow.

Q. Okay. Can you just briefly explain why not knowing the time isn't that significant in terms of making that determination?

A. Because you may have, like, for instance, you drink -- you go out to the bar, and you start

drinking a couple of drinks, and then you start eating; you may have absorbed that much faster on an empty stomach. And then, you eat, and then you start drinking; and then, it's going to be slower. It will not have that much of a really, really a significant effect on the total, when you look at it, in general, the course of the time. For that particular time, yes, but when we're looking at the general area under the curve, it doesn't have that much of a significance. But if you know and you calculate it with slow absorption, you know you're giving the benefit of the doubt to the defendant.

Q. Okay. And in this particular case, were you given facts concerning whether the hypothetical individual had eaten or not?

A. Had eaten?

Q. Yes.

A. Yes.

Q. And so, let's discuss the importance of knowing the first drink. Is that something that's considered important in regards to extrapolation?

A. Yes.

Q. And what about knowing when the last drink was?

A. Yes, both are important. Because you can

constract this curve; that makes it more accurate. Yes, you can do extrapolation without that information, but it would be less accurate.

Q. Okay.

A. But we have here, the start time and the stop time and every information, so that would make it accurate.

Q. And how would that time interval make it more accurate?

A. Because from the total time -- because you have the end time here, what the concentration is, and the software can calculate how many drinks that that person should have drank to get to that level. This is the established fact through pharmacokinetics.

So, once it calculates, it will give you each time. If you look at this first, through all numbers, the time in 24 hours, it will give you at 18:00 there was zero alcohol; 18:20 there was .13 alcohol. It gives you all the numbers at each hour, and then you can tell, you know, at what time.

THE COURT: Can I look at your copy?

THE WITNESS: Yes.

THE COURT: Thank you.

A. So, this is why it's important; it makes it

more accurate.

Q. (BY MS. WILLIAMS) Okay. And so -- and correct me if I'm wrong. Through the different formulae that's listed at the top, is it the same equation -- and we're trying to determine the constant that gets applied into that equation; is that a correct understanding?

A. Yes, it's the same formula. The difference is listed here on the volume of distribution. It's the same formula; the volume of distribution is going to be different for each. And then, all of them would have -- because the volume of distribution is different, all of them would have a different -- at a given time, the concentration may be a little different, a little bit, between all these six formulas by each time. So -- but it's the same known Widmark original formula that all these six formulas are built into.

Q. And to address the types of drinks -- or how -- is it important for extrapolation to know how many drinks this individual may have had?

A. Yes, it will calculate it. So, yes, it is.

Q. Okay. And why is that?

A. Because it's -- the formula is actually established based on what a standard drink is. One

standard drink is .6-ounce of pure alcohol. That is, one beer is considered one standard drink, which is 5 percent alcohol. Or one glass of wine, which is 5 ounces of wine is considered one standard drink. And, you know, one and a half shot, which is hard liquor, is considered one standard drink.

So, however, the concentration of alcohol -- how much of the concentration of alcohol it finds in your system, it came from there. So, it will back calculate it. How many drinks that person would have had, or how much of the total grams of alcohol that person would have had to get to this level of alcohol at this time is derived from this formula.

Q. So, have we -- are there any variables that you need in this hypothetical for extrapolation that you didn't receive in order to make an accurate estimation?

A. I have everything from this case.

Q. Okay. So, you have all the necessary information to make an educated --

A. Yes.

Q. Okay. And so, based on that, this is -- would this estimation be accepted in the scientific community?

A. These are all peer reviewed and published formulas. And -- everything here is published, and peer reviewed, so that means that's accepted by the scientific community.

MS. WILLIAMS: State passes the witness, Your Honor.

THE COURT: Mr. Flood, you may cross. Try to remember that the jury has been waiting for 35 minutes again.

MR. FLOOD: Okay.

CROSS-EXAMINATION

BY MR. FLOOD:

Q. So, you need to know -- I noticed on your chart that you presented, you estimated a 27-minute absorption time, correct?

A. Yeah. Based on the area under the curve, you have to give it -- after the incident, it was additional 27 minutes that the person was absorbing.

Q. Right. So, it's common knowledge, and you testified that a person can still be absorbing, meaning rising, from 30 minutes, up to two hours and even beyond two hours, right?

A. If you stopped drinking at that incident time. Like, if he just stopped drinking at the incident time which 1:41, right? The incident time

is 1:41, where we go back and extrapolate to; and then you can give it two hours just for absorption, after that.

Q. Right. So, the time of the last drink that you used here was 12:00 o'clock?

A. Yes, that's what is given to me.

Q. And then, you said that he would have stopped absorbing at 12:27?

A. Yes.

Q. That's what this is, military time, right here (indicating)?

A. Yes.

Q. Okay. So, you're only allowing 27 minutes for him to absorb, correct?

A. I didn't --

Q. The program did.

A. -- the computer allowed it to go that way. Because depending on how much drinking -- he started -- based on the start time, like, he started at 6:00 o'clock, right, 6:00 p.m.? And then, he stopped at 12:00. So, what -- when the computer plugs in, and then, the concentration of the blood, you know, the blood value, it would calculate how many drinks that would be. And it gives it the same rate for all those hours. That means the person

should have been absorbing for about 27 minutes for all the drinks that he was drinking. That's why it was going only 27 minutes, based on the area under the curve.

Q. So, you're making a lot of assumption to plug this number into this computer program, right?

A. This is partly the facts that I'm given. I just put it in there, it just plugged it into the formula, and the formula gives that out.

Q. Like, you need to have the weight you put in?

A. Yeah.

Q. And you didn't do this calculation on your on, you put it into this BAC-Tracker?

A. Yes.

Q. And you let it calculate it?

A. Yes.

Q. And you put in the height that was given to you by the State?

A. Yes.

Q. Time of last drink?

A. Yes.

Q. And so you're -- and you're assuming that there was, like an even, perfectly spread-out-drinking pattern over the six hours of the

time period the State gave you, right?

A. Yes.

Q. But you don't know that, personally, to be true, right?

A. No.

Q. Do you know the alcohol concentration of the beverages?

A. No.

Q. And that's an important factor, that from all the peer-reviewed literature, that's something to take into consideration when doing extrapolation, right?

A. No, what you need to know is what's in the system. How much alcohol was in that person's system.

Q. Right.

A. It doesn't matter how many drinks. It will calculate it automatically for you. But what you need to know is how much it was at one time, and when does that person start drinking, and it would automatically draw it to you.

Q. Exactly. So, if there's a drink with higher alcohol -- you said you need to know how much alcohol is their system?

A. We know how much alcohol is in his system,

that's what the starting point is, we know that.

Q. Okay. Well, the information you were given was three drinks over six hours?

A. The number of drinks really, really doesn't matter.

Q. Okay. It doesn't when you're trying to figure out the drinking pattern to do extrapolation, right? If a person drank more towards the end, that would affect their absorption rate, correct?

A. Correct.

Q. Okay. And you don't know that factor, you're assuming an average absorption rate, right?

A. Yes.

Q. Okay. And even though a person can be absorbing for up to two hours here -- so, you can do an extrapolation, provided the person is in the elimination phase, correct?

A. Yes.

Q. Okay. Here you don't know about what he ate, right?

A. No.

Q. Okay. So, with 27 minutes allowed for absorption, that's assuming he was drinking on an empty stomach, did you factor that in?

A. What -- the factor that I use is average.

Q. Okay. So here's the averages down here at the bottom.

A. Yes.

Q. This is different absorption rates?

A. Yes.

Q. Right?

A. Yes.

Q. Slow would be a 2.5 -- and this isn't, like, hours or anything, right?

A. No, it's the half-life -- would come with the first order of absorption. The half life would be the alcohol absorption.

Q. This one (indicating) would be 6.5, right?

A. Yes.

Q. Okay. But you don't know what his absorption rate was, correct?

A. No, just -- the computer assumes the average.

Q. Okay. I'm going to try to ask just yes-or-no questions, so I can conclude the hearing faster --

THE COURT: Thank you.

Q. *(BY MR. FLOOD)* -- if that's okay with you?

A. Sure.

Q. Did you know what his absorption rate was

to plug into the computer program?
A. No.
Q. All right. So, you used an average absorption rate, correct?
A. Yes.
Q. Okay. If you used a slow absorption rate, then this number would be different, correct?
A. Could be, yeah.
Q. And it could be up to two hours, correct?
A. It's my experience that two hours -- I haven't seen, even with the slowest absorption, the maximum I saw is one and a half hours.
Q. Okay. You've given me peer-review articles. You have Garrote [phonetic] here, which I know you're familiar with.
A. Yes.
Q. It's a treatise on -- do you want me to show you all the literature that talks about how a person can be absorbing for two hours or more?
A. No, no, no, I know about that.
Q. So you're --
A. I know the literature says that, but this --
Q. I'm not asking what you have seen. I'm asking what the scientific community agrees to.

A. Correct. You're correct.
Q. A person can be absorbing for up to two hours or more, right?
A. Yes.
Q. And that depends on certain variables that you don't know in this situation, right?
A. Yes, correct.
Q. But in this case, if he was absorbing for two hours, then this number right here (indicating) would be different, correct?
A. The peak time, yeah, would be different, yes.
Q. If you used midnight as the time of the last drink, then this would be 2:00 o'clock?
A. 2:00 o'clock, yes.
Q. Okay. And the time of interest, which you say right here (indicating) is 1:41?
A. Yes.
Q. So, he would still be absorbing. If you knew those variables, instead of guessing an average, if you knew that, this -- he could still be in the absorption phase at the interest time, right?
A. Could be.
Q. And so -- but you had to put in variables into that program that are assumptions, correct?

A. Correct.
Q. Correct. Now, I don't know if you read that *Mata* case, but I know you're familiar with the variables needed to do a proper extrapolation, correct?
A. The one that I just used.
Q. Okay. Are you also familiar with the strong warnings and cautions about trying to predict a BAC when the person is still in the absorption phase? Do you know the difficulties associated with that?
A. Yeah, it could be variable, we know that. It could be variable.
Q. In fact, all of the peer-review literature puts extreme caution on even attempting to extrapolate, when a person is in the absorption phase, right?
A. Yes, it could be variable. I agree.
Q. So, you said to me, that you can calculate the Widmark formula if you know the person is already eliminating, right?
A. Yes.
Q. Okay. And that's based on this 27-minute absorption phase?
A. Yes.

Q. Which is even lower than 30 minutes, which is commonly referred to as the fastest a person could absorb, right?
A. Fastest is 15 minutes, actually.
Q. And that's based on some average between those two numbers here (indicating) that we're just guessing at, right?
A. Yes.
Q. So, the person -- if Mr. Imrecke was, in fact, still in the absorption phase -- going up -- you can't calculate that, can you, manually? You would have to use that BAC-Tracker to calculate that, right?
A. I would say because it has the logarithms of this number and that number at specific times, so it would be really long for me to calculate that, where you have a calculator right there.
Q. And I asked you about this. You would have to use this BAC calculator to figure that for you, right?
A. If I know the person is absorbing, yes, I will let the BAC-Tracker calculate it for me, instead of me trying to calculate it.
Q. And generally, it's not common practice for any lab professionals or colleagues to attempt to

extrapolate back into the absorption phase, right?
A. Correct.
Q. Okay. It's fraught with difficulties, and you're well aware of that, right?
A. It's just -- only because you cannot do the uncertainty and all those assumptions -- variable assumptions that, you know, we cannot just go and just calculate it.
Q. Okay.
A. It needs to go through some logarithmic calculations, you know, additionally, with absorption constant. See, for the elimination, because there is a constant rate, it's very easy to calculate that. But while the person is absorbing, this exponential and logarithmic calculations, so -- which -- so, you need a calculator for that instead of you trying to figure it out.
Q. Okay. And you said you would need the computer program to figure it out?
A. Yes.
Q. So, just to summarize, the assumptions you're making are his height and his weight?
A. Those are not assumptions those are facts.
Q. Okay. You need to know information about when he ate to determine his absorption rate?

A. Yes.
Q. And we don't have that here. So, you're assuming an absorption?
A. Yes.
Q. And did you manually pick that and, say, let's just assume this for this calculation?
A. No. I just plug the lowest in and highest in, and the computer will do the average.
Q. The average?
A. Yes.
Q. Not based on facts that we know, just computer average?
A. Yes.
Q. And those are the important factors to be able to give an accurate BAC if the person is in the elimination phase?
A. Yes.
Q. It becomes much more difficult, during the absorption phase, right?
A. It just increases the range; that's all it does really.
Q. The rate of error, right?
A. Yeah. But the rate of error increases, and then your range is going to be increased.
Q. And so, you said you give the benefit of

the doubt to the -- you said "defendant"; I'll call him Mr. Imrecke -- by reporting the lowest BAC from the analysis, right?

A. Yes.

Q. Okay. Well, you gave this wide range of BACs here, right?

A. Yes.

Q. From here to here (indicating on State's Exhibit A)?

A. Uh-huh.

Q. And you reported it to be based on the assumptions .152?

A. Yes.

Q. Well, this isn't giving him the benefit of the doubt, is it? Because if you look at the lowest one -- and this isn't in color -- but I think we determined that this bottom one is the Seidl?

A. Yes.

Q. That is well below .152, and that's not giving him the benefit of the doubt. You're averaging all of these formulas, aren't you?

A. Yes.

Q. Okay. Do you know how to calculate the Watson formula by hand?

A. The Watson formula?

Q. Right here (indicating).

A. Yeah. I mean, like I said, the differences of the -- there are factors that's given over there.

Q. And the Seidl formula, you can write these out by hand --

A. Yeah.

Q. -- and calculate them without the BAC-Tracker?

A. Well, really the formula is already out there. I mean --

Q. I'm asking if you can do this and explain how these formulas work: Ulrich, Forrest, not Widmark, Seidl, Watson, and then one was developed by Dr. Mozayani?

A. Yeah. She just averaged them; that's all.

Q. Okay. You didn't do this calculation; it was just put into the software that y'all purchased?

A. Yeah.

Q. Just plug in the numbers and then you let it generate this report and that's what you rely on?

A. Yeah.

Q. Okay.

MR. FLOOD: I'll pass the witness.

MS. WILLIAMS: Brief redirect, Your Honor, if I may?

THE COURT: I have a question. And I want y'all to address my question after I ask it.

If we were to assume the slowest absorption rate, then what would the extrapolation be for the time of stop at 1:41? Using all your other factors.

THE WITNESS: Yeah. It would be a little bit smaller, but I don't know.

THE COURT: But you can't tell us what?

THE WITNESS: I can't tell you. I'd have to have the BAC-Tracker to change that number on the bottom. Can you pull that one up?

THE COURT: Could you do any of those off the top of your head with a calculator without the BAC-Tracker?

THE WITNESS: With the absorption rate constant, no, I can't. But -- only elimination I can.

THE COURT: So you're telling me, if he was in absorption still, when he was stopped, you can't extrapolate?

THE WITNESS: Manually, no, I cannot extrapolate.

THE COURT: But you're saying this

thing can do it?

THE WITNESS: Yes.

THE COURT: Because it assumes something?

THE WITNESS: Yes.

THE COURT: Questions?

MS. WILLIAMS: Questions of your question, or redirect?

THE COURT: Either one.

MS. WILLIAMS: Your Honor, I do have some questions.

THE COURT: Well, let's make it snappy.

MS. WILLIAMS: Okay.

REDIRECT EXAMINATION

BY MS. WILLIAMS:

Q. I would just like to clarify a few things with you, if you don't mind, Dr. Guale. This number right here, this 27 minutes --

A. Yes.

Q. -- you originally testified that that would be after the time of the incident; is that correct?

A. It would be 27 minutes after the stop of the drink.

Q. All right. And so, in this case, the

report says that the time of the stop was 1:41 --
A. Yes.
Q. -- is that correct?
A. Yes.
Q. And so, originally, defense presented it as midnight; is that correct?
A. Midnight is the time where the person stopped drinking.
Q. Okay.
A. Yeah.
Q. And so, the time of the last drink --
A. Yes.
Q. -- and just so we can clarify, was midnight?
A. Yes.
Q. The time of the stop was 1:41?
A. Yes.
Q. And your paperwork is actually saying he came out of absorption 27 minutes after that stop --
A. Yes.
Q. -- is that correct?
A. And so --
THE COURT: Meaning, 2:08 then? 2:08 a.m., did I do that right?
THE WITNESS: No, before the incident.

THE COURT: Okay. We're all saying different stuff. He thinks you mean 12:27 a.m. is when --
THE WITNESS: It peaked -- he peaked.
MR. FLOOD: Right.
THE COURT: 12:27?
THE WITNESS: Yes, he stops absorbing.
THE COURT: Before the stop?
THE WITNESS: Yes, before the incident, yes. I like to call it "time of interest," 1:41, yeah.
THE COURT: But they think you mean 27 minutes after the stop if I'm understanding correctly. Which is it?
THE WITNESS: No, that's 27 minutes after the last drink, which is 12:00 o'clock.
THE COURT: Okay. So, 12:27 a.m. is --
THE WITNESS: The stop.
THE COURT: -- the end of absorption --
THE WITNESS: Yes.
THE COURT: -- according to this?
THE WITNESS: Yes.
THE COURT: That isn't what you were

just saying, I think.

MS. WILLIAMS: No, Your Honor, I was attempting to clarify. I think we're getting there.

Q. (BY MS. WILLIAMS) Okay. So, that absorption rate, that 27 minutes --

A. Yes.

Q. -- I guess. The questions we have -- where all parties seem to have -- is that 27 minutes after he stopped drinking at midnight, or after he was stopped at 1:41 in the morning, an hour and 41 minutes after his last drink?

A. After he stopped drinking at 12:00 o'clock, 12:27 he stopped absorbing. At the time of the incident, which 1:41, he was eliminating according to this.

Q. Okay. And so, would it be possible, if you wanted, for the benefit of this subject, if you wanted to, could you calculate using the slow absorption rate, and then calculate also using the fast calculation rate?

A. Individually? Yes, I can do that with the software.

Q. So, if we were to say we wanted to do this at the benefit of the defendant -- I'm sorry, at the subject, and do it at the slowest absorption rate,

you can do that with your program?

A. Yes.

Q. And speaking of BAC-Tracker, is BAC-Tracker a program -- in terms of extrapolation, is that something that's accepted within the scientific community?

A. Yes.

Q. And how do you know? How do you know that's accepted within the scientific community?

A. It's published.

Q. There's information published on BAC-Tracker?

A. Yes. There's a manual for it. And then, there's also publications in there, and I gave it to the defense counsel.

Q. Do you think that that might be something that could assist the Court in better understanding the program?

A. Yes. There's a manual for each thing, which the software assumes and doesn't assume. It's listed in there, in the manual.

MS. WILLIAMS: Your Honor, may I approach the witness?

THE COURT: Yes, but it's really not going to help me.

MS. WILLIAMS: You'll find that it's not helpful --

THE COURT: This software isn't helping me on her personal understanding of the equations of the formula, and not just plugging something into a computer. Because it seems like you, or I could data entry -- or enter that data ourselves without understanding a darn thing. And what we have to prove under *Mata* and the other cases, before this goes to the jury, is that she can calculate it without that; that she can explain it. And so, that's why that's not helpful to me.

MS. WILLIAMS: Yes, Your Honor.

THE COURT: And so, the answer we are consistently getting, at this point, is that she could do it with her software. I'm not hearing the other.

So, what we're going to do now is we're going to recess this hearing, and we're going to go into testimony with the jury. And then, we'll have a hearing over lunch. We'll finish this hearing over lunch and decide whether she'll be testifying to the jury after lunch. We have left them for almost an hour, again, in the jury room. And I just find that unconscionable.

All right. So, that was my mistake in thinking we could do this, and I will own up to the jury.

Take a quick break, and then we're going to be starting with the jury.

(Recess taken)

THE BAILIFF: Please rise for the jury. Everybody stand up.

(Jury enters the courtroom)

THE COURT: You may be seated. Let the record reflect that the parties and jurors are present and seated in the courtroom.

Folks, it's on me. I've been trying to finish the hearing that we were doing, and it took a lot longer than I thought. So, again, I apologize for keeping you in the jury room, but now we're ready to proceed with testimony.

Call your next witness.

MS. WILLIAMS: State calls Kimberly Peterson.

THE COURT: Thank you.

THE BAILIFF: Your Honor, this witness has not been sworn.

THE COURT: Would you please raise your right hand?

(Witness sworn)

THE COURT: All right. Come on up.

(Witness complies)

THE COURT: Thank you.

You may proceed.

MS. WILLIAMS: Thank you, Your Honor.

KIMBERLY PETERSON,

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MS. WILLIAMS:

Q. Will you please introduce yourself to the jury?

A. My name is Kimberly Peterson. That's P-E-T-E-R-S-O-N.

Q. What is your occupation?

A. I'm a Toxicologist III at the Harris County Institute of Forensic Sciences.

Q. And what is a toxicologist?

A. A toxicologist performs scientific tests on body fluids and tissue samples in order to determine if there's any drugs or chemicals present in the body.

Q. And how long have you been so employed?

A. I've been employed at Harris County for about a year and a half.

Q. And have you always held this position?

A. Yes.

Q. And so, can you explain what some of the duties are of the current positon?

A. Yes. My primary duty is to analyze the tissue samples and blood for the presence of ethanol or the other volatiles.

Q. Okay. And you mentioned you work for the Harris County Institute of Forensic Sciences, what accreditations does that laboratory hold?

A. We have three accreditations. The first one is the American Board of Forensic Toxicology or ABFT. Another one is the American Society of Crime Laboratory Directors Laboratory Accreditation Board International or ASCLAD/LAB for short. And the third is the Texas Forensic Science Commission.

Q. Now, there -- out of one of those accreditations that you mentioned, one of them is very important. Which one and why is it so significant?

A. Well, all of the accreditations are important. We -- the entire lab is accredited on a national level, a state level, as well as, an international level. And each of these accreditations requires that we follow strict

standards in order to obtain the accreditations from that body, as well as, undergo regular inspections to maintain that accreditation.

Q. All right. So now can you discuss with us your educational background?

A. Yes. I graduated in 2012 with a Master's of Science in Forensic Science from California State University Fresno. And I also, have bachelors' degrees in both biology and anthropology, which I received from Central Washington University in 2008.

Q. All right. And what specific training have you received in the area of ethanol analysis?

A. Since, I've been employed at Harris County I was required to undergo an alcohol training program, and that included performing competency tests, as well as, passing a written examination. Once I completed that, I was considered sign-off and able to participate in proficiency examinations, which are where a third party assigns testing and will review or grade my results.

Q. All right. And do you have any certifications relevant to this area?

A. Yes. I am certified by the American Board of Forensic Toxicology, which is one of the accrediting bodies I mentioned earlier as a

diplomate.

Q. All right. And have you testified as an expert witness in the area of forensic toxicology before?

A. Yes.

Q. And has that been on few or many occasions?

A. Few.

Q. And does that include expert testimony in the courts of this county?

A. Yes.

Q. And so -- just so we can know, about how many blood DWI trials have you testified in so far?

A. I believe this is my seventh time testifying.

Q. Okay. Now, can you explain to the ladies and gentlemen of the jury, the science behind blood-alcohol testing?

A. Yes. So, for blood-alcohol testing at Harris County, we use a method, which is an instrument called the -- I'm sorry, the method is called headspace gas chromatography.

MS. WILLIAMS: Your Honor, may I approach the witness?

THE COURT: Yes.

Q. *(BY MS. WILLIAMS)* I have what's marked for

demonstrative purposes, State's Exhibit No. 19, do you recognize this?

A. Yes.

Q. And do you believe it would aid the jury in understanding gas chromatography and how it works --

MR. FLOOD: Judge, to save time, I'll stipulate to the predicate and admissible, if that's okay.

MS. WILLIAMS: Okay. At this time, State moves to introduce what's previously been marked as State's Exhibit No. 19 into evidence.

MR. FLOOD: No, objection.

THE COURT: State's 19 is admitted.

MR. FLOOD: I'm sorry, I thought they were offering it for demonstrative purposes, and that's what I agree to.

MS. WILLIAMS: We will use it for demonstrative purposes, Your Honor.

THE COURT: Thank you. That is how it is admitted, then.

MS. WILLIAMS: Your Honor, may I publish?

THE COURT: Yes, ma'am.

Q. *(BY MS. WILLIAMS)* Okay. Now, can you began to explain the science behind the blood testing in --

specifically, the gas chromatography?

A. So gas chromatography headspace is the method we use at our lab, and it's the most popular or commonly used method to determine ethanol or blood alcohol in forensic laboratories. It's very sensitive, as well as accurate, and it's, as I mentioned, a way to determine the amount of ethanol or alcohol in a sample.

Q. And has the science behind this been, generally, accepted in the field?

A. Yes.

Q. And has that technique been tested in actual field conditions?

A. Yes.

Q. And has that technique be subject to peer review and publication?

A. Yes.

Q. So, that technique has been accepted within the relevant scientific community?

A. Yes.

Q. And how do you know that?

A. It's considered the gold standard for testing blood alcohol or ethanol, and it's been published in hundreds of articles.

Q. All right. So, can you explain, in the

simplest manner, kind of, how this process works in terms of testing the ethanol in someone's blood?

A. Yes. So, we're able to determine the amount of ethanol in a blood or tissue sample because of Henry's Law in action.

And Henry's Law is just a scientific rule, essentially, that states that at a constant temperature in a closed system or container, there's a relationship between the amount of ethanol or alcohol in the actual blood, in comparison to the space above the actual blood, which is in the picture referred to as the headspace.

And so, that picture shows a vial that we actually would use to test a sample with that closed container; so, we're able to test the headspace and get the amount of alcohol present in the sample.

Q. And since we're looking at a PowerPoint -- and you may have addressed this -- you mentioned headspace, what is headspace?

A. Headspace is just the space above the sample.

Q. Okay. And what happens -- okay. So, can you, kind of, tell us a little bit more about the process of analysis?

A. Yes. I actually have more detail in the future slide, as far as the actual testing. Once the sample is introduced on the instrument -- would you like me to explain that first, or explain the slide that's listed?

Q. You can explain that first.

A. Explain which one first, I'm sorry?

Q. The slide that's listed.

A. Okay. So, this slide, kind of, shows the beginning of our process. So prior to running any samples -- case samples on the instrument, which is shown up there, I will have to do what is referred to as instrument calibration.

And the calibration is -- just consists of six standards, which are from a third party, and they contain a known amount of alcohol in them. And so, what we're doing is we run them on the instrument; and we know that they must fall within a narrow range. So, by running those and knowing that the instrument is able to correctly determine the amount in those standards, we're, then, able to proceed with putting our case samples on the instrument.

Q. Okay. If you need to, you can just tell me when you would like to have the next slide.

A. Okay.

Q. Okay. So, how does your lab receive the blood specimen that is to be tested?

A. So, an officer will bring the sample to our laboratory and give it to one of our evidence technicians; the evidence technicians will then take the sample, which also comes with -- the sample is sealed, and it also comes with paperwork and enter that into our laboratory information system or database. There labels -- there the system will generate a unique identifier for that case, and then it's brought to our toxicology department for testing.

The toxicologist department -- one of the evidence technicians, will then open up the actual evidence, make sure that everything is properly labeled, take pictures of the tubes, and then actually place labels onto the tubes. And then from there, they'll place them into a locked refrigerator, where an analyst, such as myself, will be able to access the refrigerator to perform the testing.

Q. All right. And in regards to these blood vials, does your lab have any special requirements for the blood vials that are submitted?

A. Yes. We would prefer two gray-topped tubes. We also -- we require the correct paperwork is received with the tubes and that the evidence container is sealed.

Q. And how are blood vials tracked, once your lab has taken custody?

A. So as I mentioned previously, our toxicology technicians will label the tubes, and so each of the tubes has a label specific to that case.

In addition to that, every analyst has their -- has a barcode with a unique identifier only known to that individual. And so, when I take a sample into my custody, I will scan that sample, and then enter my barcode, and it's tracked in our information system.

MS. WILLIAMS: Your Honor, at this time may I approach to --

THE COURT: Yes.

MS. WILLIAMS: Your Honor, may I publish?

THE COURT: Yes.

Q. *(BY MS. WILLIAMS)* Looking at State's Exhibit No. 15, do you see that barcode?

A. Yes.

Q. Okay. And from that barcode, are you able

to identify this blood vial?
A. Yes.
Q. And what is that unique barcode?
A. The barcode is what the toxicology technician has placed -- I'm sorry, the evidence technician has placed with that case once it was received by our laboratory.
Q. And what is the lab number associated with this case?
A. It's IFS14-16245.
Q. And how many vials are associated with this case?
A. Two.
Q. And did you analyze the blood contained in this vial to determine its alcohol content?
A. Yes.
Q. And how does your lab ensure that all the samples that are submitted for testing, are tested in the exact same manner every time, every-single-time?
A. We follow a standard operating procedure.
Q. And we spoke of the instrument earlier, was the instrument that you used to test this blood, was it working properly?
A. Yes.
Q. And does that instrument require

maintenance, I think, you addressed it on the previous slide about calibration?
A. Yes. They're -- we are required to do a date-of-use maintenance on the day that I plan to run. We do preventive maintenance, and then as-needed maintenance, as well as yearly maintenance.
Q. All right. And -- like I said, just let me know if you need a new slide. Before testing the samples, what is the first step in ensuring that the instrument and standards are correct?
A. I believe that was what I, kind of, explained previously. To make sure that the instrument is working correctly, I'll run three negative quality controls. Those just contain negative blood; so, it doesn't have any alcohol in it. As well as, an internal standard, which is just a compound that is structurally simular to alcohol. So, it will behave on the instrument similarly to alcohol.
So, we can be confident that if it's in those samples -- if we added it to the sample and it behaves on the instrument the way that we predict it should, then we can use that as a ratio to determine how much alcohol is present in the sample.
Q. And you mentioned standards, where do the

standards come from?

A. Our standards come from a third party that is -- that has to be deemed acceptable by our accrediting bodies.

Q. And how does your lab ensure -- there's quality controls ensured with the results?

A. We have to have negative -- so between every ten samples, they must be bracketed by two quality controls, which are -- must fall within that same narrow range. The instrument must be able to detect those within a narrow range.

We also -- our testing process requires that we receive two tubes. So, we will screen on one tube, which just means we're determining if there is ethanol present. And then on the second tube, we will confirm to determine how much ethanol is actually present.

And on that confirmation test, we are required to put a negative quality control, which I mentioned earlier, that does not contain any ethanol. And so, that is just to ensure that the instrument is not -- is able to correctly determine the amount of ethanol in the sample, as well as, ensure that there is no carryover from one sample to the next.

Q. And how do these quality-control samples

affect the validity of the samples that come before and after that?

A. So the quality controls -- if we know that they must fall within a strict range, and they fall within that strict range, then we can be confident that the instrument is correctly able to determine the amount of ethanol in those results, which ensures that the instrument can correctly determine the amount of ethanol in our case samples.

Q. And what happens if the quality-control checks that are in place, do not function the way they are designed?

A. So, if the quality controls fall outside of the range, we must -- we must go back to the last acceptable quality control and reinject from that point. So, start the run over from that point. And we only have one opportunity to restart the run. If it's outside of the range again, we have to repeat those samples on a different day.

Q. All right. And so, will a sample that it tested before or after be reported as final if the quality-control checks don't check properly?

A. No. We will have to repeat that sample once the problem is rectified.

Q. Okay. And in this particular instance, did

you follow the protocol for testing the blood using that machine?

A. Yes.

Q. And -- now, referring back to State's Exhibit No. 15, were these the vials of blood taken from the defendant -- sorry.

Were these vials of blood taken from the defendant, were these the ones that you analyzed?

A. Yes.

Q. And you mentioned earlier that there's two vials, did you test both vials?

A. Yes.

Q. And what is the purpose of doing that?

A. So we test -- we designate one, the A Tube; and the second tube will be the B Tube. And, I think, I might have mentioned this, but the A Tube is used to screen, just to detect if ethanol is present. And the B Tube is to confirm and really determine how much ethanol is present.

Q. All right. And -- now, let's say that you tested both vials, and you have results for both vials, how close does that first run have to be to the second run to qualify as a valid test?

A. So, the values of both tubes must be within 5 percent of one another for us to report the value.

Q. Okay. And why does it have to be within 5 percent?

A. That's according to our standard operating procedures.

Q. Now, in this particular case, did you have two runs that were within 5 percent of each other?

A. I, actually -- I had to run this -- I had to perform the tests on the samples three times. And our standard operating procedures do allow me to run a total of three times if need be. And because I ran a screen on Tube A, and then I performed the confirmation on the B Tube, those two values were not within 5 percent. So, our standard operating procedures require that I take the lower -- the tube associated with the lower result and perform a test, a third test on that. And so, I did do that. And that result was within 5 percent of one of the other results, so I was able to report my result.

Q. Okay. So -- correct me if I'm wrong. Just to summarize, so you followed the lab's protocol, correct, did you follow the lab's protocol?

A. Yes.

Q. And you ultimately reran Tube A, is that an accurate understanding?

A. I believe it was Tube A -- may I refer to

my notes just to double-check?

THE COURT: Yes.

THE WITNESS: Thank you.

A. Yes, that's correct.

Q. *(BY MS. WILLIAMS)* And after rerunning Tube A, was it then -- was that third run within 5 percent of the second run?

A. Yes.

Q. And does your lab -- luh-bor-ra-to-ry or lab-ruh-tory policy or protocol, allow you to report the result at that time?

A. Yes.

Q. And with that, what did those results -- what were you able to tell -- to determine from those results?

A. I was able to determine that the sample did have ethanol present.

Q. And what were you able to determine about the reliability of the test or the accuracy of your tests?

A. Because I was able to get two tests within our narrow range of 5 percent, that lets me know that the test is accurate, sensitive, and also reliable, and repeatable.

MS. WILLIAMS: Your Honor, may I

approach the witness?

THE COURT: Yes, ma'am.

MS. WILLIAMS: Thank you.

Q. *(BY MS. WILLIAMS)* I'm showing you what's previously been marked as State's Exhibit 20. And do you recognize it?

A. Yes.

Q. And how are you able to recognize it?

A. It has our Harris County Institute of Forensic Sciences' letterhead. The laboratory number is the same as this case. I, also, recognize my name as the analyst, as well as the technical and expert reviewers.

Q. Okay. And is this a true and correct copy of the lab results stemming from the analysis of a Mr. Daniel Bryant Imrecke?

A. Yes.

Q. And has it been altered in any way?

A. No.

Q. And is this -- was this made at or near the time of the analysis that we were discussing?

A. Yes.

Q. And was it made in the ordinary course of business for your lab?

A. Yes.

Q. And were you able to --

MS. WILLIAMS: Your Honor, at this time, I'd like to move to introduce what's been previously marked, as State's Exhibit 20 into evidence.

May the record reflect that I'm tendering to opposing counsel.

MR. FLOOD: I'm thinking -- I do have an objection. Is it okay if we approach?

THE COURT: Yes.

(Discussion at the Bench, on the record)

MR. FLOOD: Your Honor, I hate to do this again, but based on her testimony and the discovery that we got, that what she just said, the proper procedures were not applied correctly, on the occasion in question, for this result to be reported.

And I can show that through the documents I received in discovery. And I would move to suppress --

THE COURT: What is the problem?

MR. FLOOD: Okay. Well, it was tested three times. The first time it was tested, the quality controls were not in tolerance, and we have that documented. And according to her testimony,

then, they have to run it again. The second time is the one that's reported, and the quality controls were within the check. The sample was then tested a third time, and there's no 5-percent agreement, according to their procedures. And she reported the higher number, which is not in accordance with their procedures. She got the first one and the second one were within 5 percent, but it was based on faulty quality controls.

THE COURT: For the first one?

MR. FLOOD: For the first one. So, there's no two that are within the 5 percent, that are based on quality controls that are within tolerance, and she said she can't report it unless that happens.

MS. WILLIAMS: Your Honor, can I address that?

THE COURT: Yes.

MS. WILLIAMS: So from my understanding of her testimony, Tube A, and Tube B, Tube A was the first run; Tube B was the second run. As she stated, Tube B was done correctly. And so, because the issue was with Tube A, she reran Tube A a third time, as she's allowed to. Tube A and Tube B, the second and the third were then within that

5-percent range, and she is allowed to report the number at that point, based on what I listened to of her testimony.

MR. FLOOD: Right. But the documents show it went: B, A, A, and B was first, and it was out of tolerance on three of the controls. And so, it was run again. And so, the number that's being reported is what we have. But then, it was run again; and it came back at a .128 on the A. So, the A is being reported, but it was analyzed again; and the second time it was out of 5 percent. So, we don't have anything --

THE COURT: I'm going to send them for lunch --

MR. FLOOD: Okay.

THE COURT: -- the jury.

MR. FLOOD: I was hoping lunch would be here earlier, maybe.

THE COURT: I think they're going out.

MR. FLOOD: And I was going to just cross on this, Judge, but I can't forego an objection, based on a third prong of *Kelly*.

THE COURT: Prime, take them out.

I'm going to send y'all to lunch.

THE BAILIFF: Please rise.

(Jury leaves courtroom)

THE COURT: You may be seated. We're still on the record.

Mr. Flood, would you like to take the witness on voir dire with regard to State's 20?

MR. FLOOD: Yes, ma'am, I would.

VOIR DIRE EXAMINATION

BY MR. FLOOD:

Q. You provided discovery with respect to the three different analyses of this blood result?

A. Yes.

Q. IFS14-16245, that's the lab number we're dealing with, correct?

A. Yes.

Q. It was originally analyzed on December 17th of 2014?

A. Yes.

Q. And --

MR. FLOOD: May I approach the witness?

THE COURT: Yes.

Q. *(BY MR. FLOOD)* I'm going to show you what's been marked as Defense Exhibit 3. Is that a copy of the chromatogram of this blood analysis from December 17th, 2014?

A. Yes.
Q. Okay. And I'm showing you what's marked as Defense Exhibit No. 4, 5, 6, 7, 8, and 9, and if you could, look at those and tell me if you recognize those and if they pertain to the blood analyses with respect to this lab number in this case?
A. Well, these -- I believe, that one is from the 17th runs, correct --
Q. Correct.
A. -- and these are from the 22nd.
Q. Right. So, do you recognize that as a quality control from the second run on December 22nd?
A. Yes.
Q. Okay. For this sample?
A. No.
THE COURT: Which exhibit are you talking about?
MR. FLOOD: This is Defense Exhibit No. 4. Well, let me --
Q. *(BY MR. FLOOD)* It was in the batch with this sample, correct?
A. No, I --
Q. The second analysis of this blood analysis was on December 22nd, right?
A. So, the analysis of -- this is Tube A --

Q. Okay. This is Defense Exhibit 3.
A. Yes. And the standards -- this is associated with the data. This is raw data from the calibration curve before it was calibrated for Tube B on the 22nd.
Q. Right. But --
A. But this is not the complete information from the calibration run.
Q. I know. I'm just asking, though, the second analysis of this sample was run December 22nd, correct?
A. Yes, that's correct.
Q. And that's the one that's being reported, right?
A. That's not the final result. The final result that is on the report was associated with Tube A, which was run on the 24th, I believe.
Q. So, there's a fourth run?
A. No, that's the third run. These -- this calibration curve raw data is from the 22nd, but I also ran Tube A on the 24th.
Q. Okay. So, you analyzed it on the 17th -- what dates did you analyze this blood?
A. I ran Tube A on the 17th, Tube B on the 22nd, and then Tube A on the 24th.

Q. Of December?
A. Yes.
Q. And it was never analyzed again?
THE COURT: I'm sorry, I need to write that down, and I wasn't quick enough. Tube A on the 17th?
THE WITNESS: Tube A on the 17th, Tube B the 22nd, and then Tube A on the 24th.
THE COURT: Thank you.
Q. *(BY MR. FLOOD)* And then that's all, just three times?
A. Yes. For the alcohol testing, yes.
Q. It was never tested again for alcohol?
A. No, not to my knowledge.
Q. Okay. Let's see. So, do you have -- so, the 24th is the one that's being reported, correct?
A. Yes.
Q. Okay. And do you have -- do you have a copy of the analysis for the 22nd?
A. The actual result of the -- tube results?
Q. Right.
A. Yes.
Q. Okay. So, you recognize 4 through -- Defendant's 4 through 9, as they relate to the sample that was tested on the 22nd -- I'm sorry, I misspoke

on the dates?
A. Yes, I recognize this data.
Q. Okay. And the -- okay. So --
MR. FLOOD: Your Honor, I'd like to tender to opposing counsel 3 through 9 and ask that they be admitted for the purposes of this hearing.
THE COURT: Is there any objection?
MR. SAWTELLE: He handed us multiple documents; we're just going over them because we've never seen them before.
THE COURT: Okay.
MR. SAWTELLE: And we'd ask for, like, a minute.
MS. WILLIAMS: State has no objections, Your Honor.
THE COURT: All right. Defense 3 through 9 are admitted for purposes of this hearing.
Q. *(BY MR. FLOOD)* Okay. Do you have a copy of the result from the 22nd?
A. I have the original copy.
Q. Okay.
THE COURT: Which of your exhibits are you talking about?
MR. FLOOD: It's one that I still need to introduce. I'm sorry, I got confused with the

dates for a second.

Q. (BY MR. FLOOD) I'm marking this as Defense Exhibit 10. And is this the analysis from the 22nd?

A. Yes.

Q. Okay.

MR. FLOOD: And I tender this to opposing counsel, also, I'd ask that it be admitted for the purposes of this hearing.

MS. WILLIAMS: No objection, Your Honor.

THE COURT: Defense 10 is admitted for this hearing.

Q. (BY MR. FLOOD) So you stated that if the two tests -- you're only allowed to analyze the blood three times, right?

A. Yes.

THE COURT: Excuse me. Is that per vial, or is that overall?

THE WITNESS: Overall. After we -- if I was to perform it three times and they didn't match, after that, then, I would have to take it to a manager and they would make a decision.

THE COURT: Thank you. I just wanted clarification.

Q. (BY MR. FLOOD) Okay. So here's Defense

Exhibit No. 3. And this would be the analysis run on December 17th, right?

A. Yes.

Q. Okay. So, this represents the first analysis, right?

A. Yes.

Q. And then, you see the ethanol result here is .128, correct?

A. Yes.

Q. So -- then, I'm showing you what's marked as Defense Exhibit No. 10. And this is also the same lab number, right?

A. Yes.

Q. Analyzed on December 22nd, correct?

A. Yes.

Q. And we see an ethanol concentration -- or BAC, I'm sorry, of .139?

A. Yes.

Q. Do you have a calculator with you?

A. No.

Q. Okay. You don't argue with me that that's not within 5 percent, correct?

A. Yes, that's correct.

Q. So, that's outside of the required lab procedures, right?

A. It's outside of my ability to report either of those values.
Q. Okay. So, you can't report them if they're outside of the 5-percent lab policy, right?
A. Not at this point, no.
Q. And that goes to -- I mean, for accreditation, you've got to have certain policies that are required to be followed, right?
A. Yes.
Q. Okay. And so, this is December 22nd. And for that batch, there's more -- you're talking about the importance of the quality controls to be within the tolerance range, right?
A. Yes.
Q. And you admitted that there were some problems, that there were some quality controls that were outside of the tolerance range?
A. No, I did not admit to that.
Q. Okay. So, this is Defense Exhibit No. 4. And here we have December 22, right?
A. Yes.
Q. Same day that you analyzed the second analysis, which was a .139, right?
A. Yes.
Q. And you see this is the Vial 1 of 1. This

is a .025 standard, right?
A. Yes.
Q. And so, here's (indicating) the acceptable tolerance range, right?
A. Yes.
Q. .022 to .027, right?
A. Yes.
Q. And let's look and see -- we have .027, right? So, it's at the top, within the tolerance range, right?
A. Yes. I also -- can I explain something about that chromatogram?
Q. I was asking a yes-or-no question.
THE COURT: Can she please answer it for my purposes?
(Affirmative response)
THE COURT: Thank you. I appreciate it.
THE WITNESS: Can you put it back on the screen.
(Mr. Flood complies)
THE WITNESS: So, the way that our instrument works is, we will -- I'll run that calibration curve, which consists of the six standards that I referred to earlier. And what

EXHIBIT #5

CALIBRATION CURVE & CHROMATOGRAMS

DEFENDANTS:

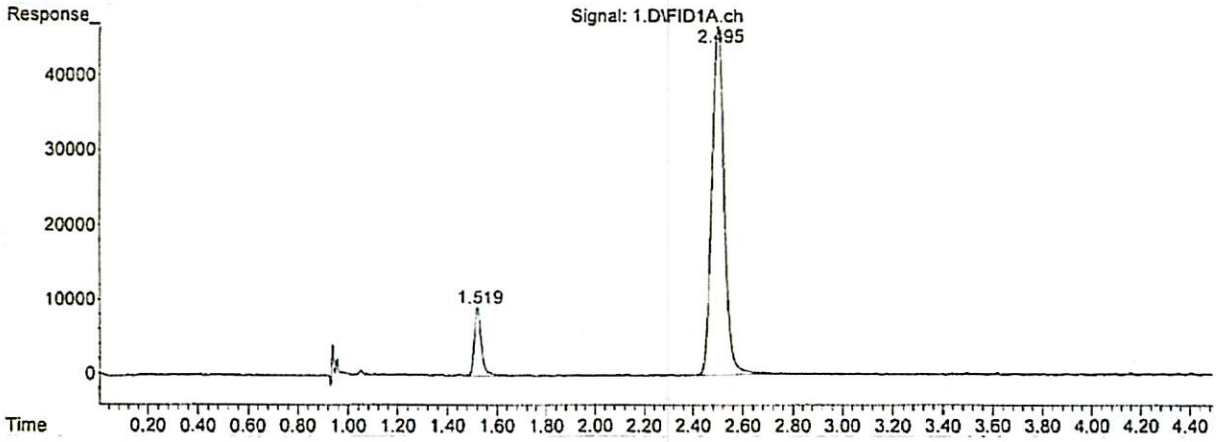
DANIEL IMRECKE
JOSE DELACRUZ

(Court transcripts for each case located in section 4)

Harris County Institute of Forensic Sciences

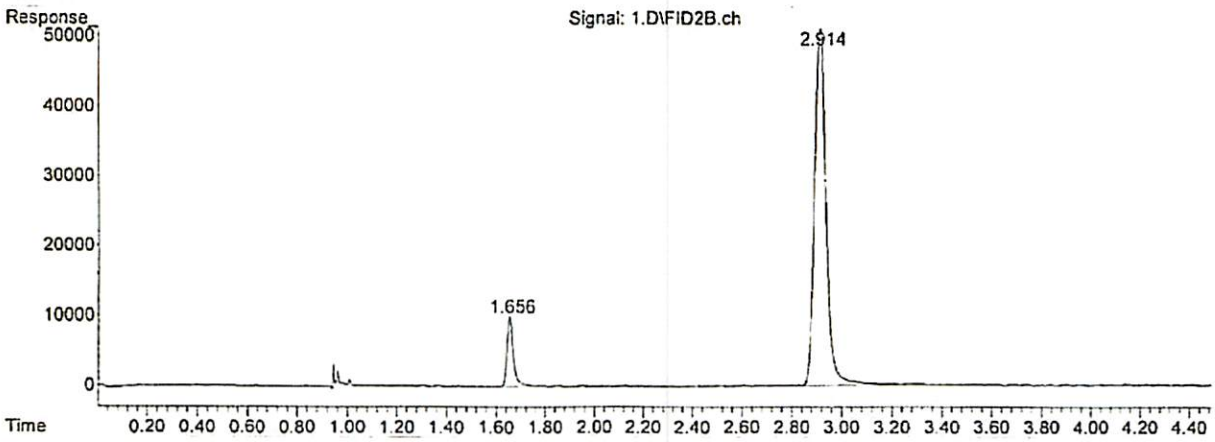
Sample Name	0.025 STD	Instrument Name	GC-2
Misc Info	RANGE (0.022-0.027)		
Tray/Vial	1/1	Operator	KP
Date Acquired	12/22/2014 7:56	Acq. Method File	ALCOHOL.M
Data File Name	1.D	Last Calibrated	Mon Dec 22 08:01:07 2014
Data Path	C:\MSDCHEM\1\DATA\DECEMBER 2014\122214_ETOH CALIBRATION CURVE\1.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.495	0.020	1630036
ETHANOL	1.519	0.027	181911

BAC-2



Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	2.914	1648580
ETHANOL #2	1.656	173775

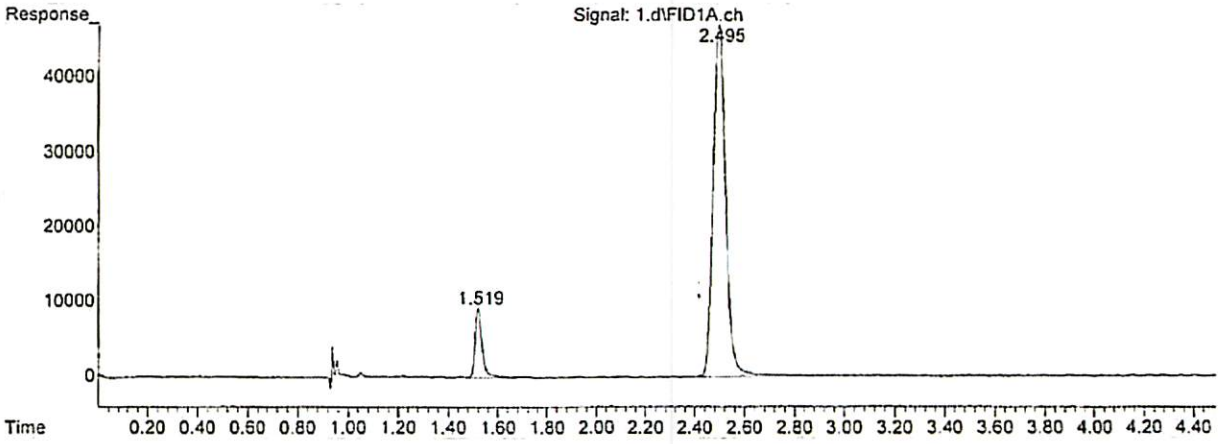
Printed on: Mon Dec 22 08:01:15 2014

KP

Harris County Institute of Forensic Sciences

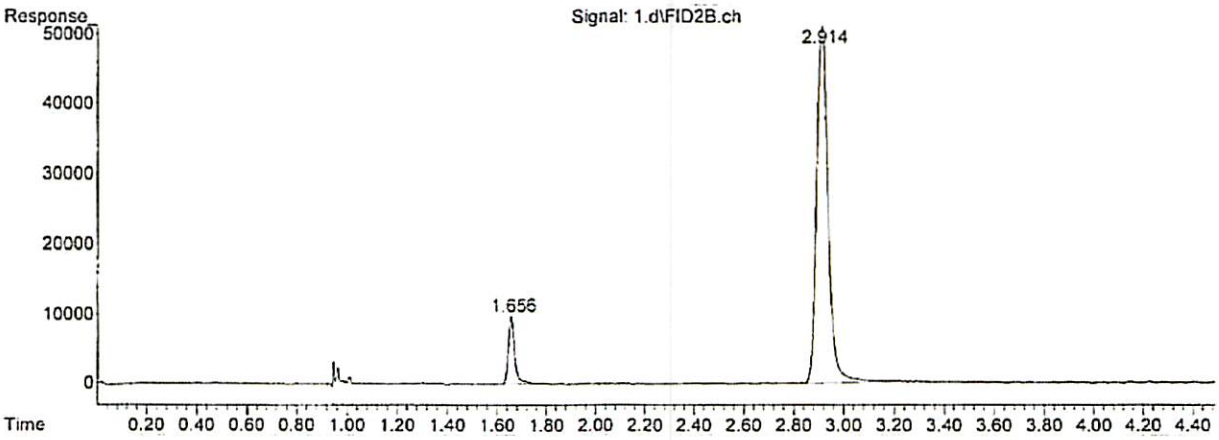
Sample Name	0.025 STD	Instrument Name	GC-2
Misc Info	RANGE (0.022-0.027)		
Tray/Vial	1/1	Operator	KP
Date Acquired	12/22/2014 7:56	Acq. Method File	ALCOHOL.M
Data File Name	1.D	Last Calibrated	Mon Dec 22 08:40:52 2014
Data Path	C:\msdchem\1\data\DECEMBER 2014\122214_ETOH CALIBRATION CURVE\1.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.495	0.020	1630036
ETHANOL	1.519	0.024	181911

BAC-2



Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	2.914	1648580
ETHANOL #2	1.656	173775

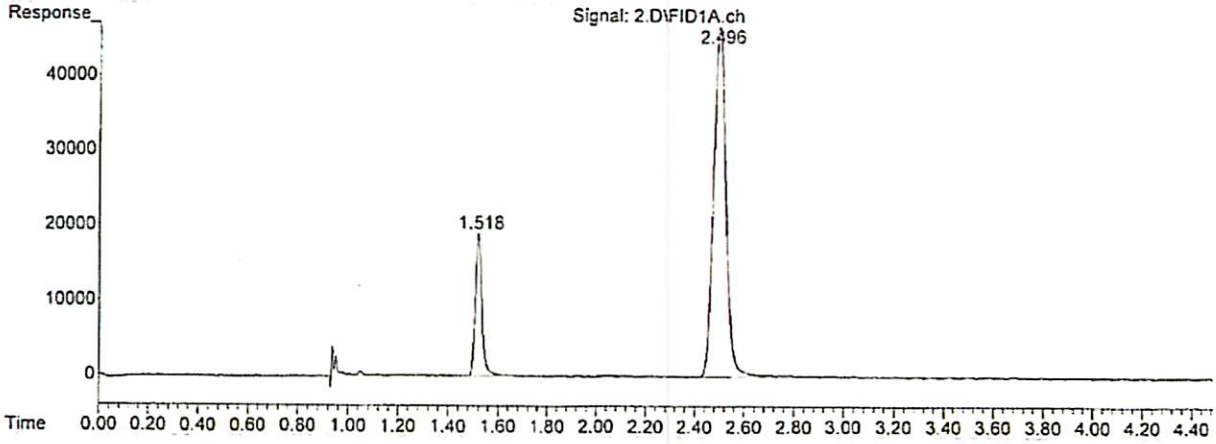
Printed on: Mon Dec 22 08:50:16 2014

KP

Harris County Institute of Forensic Sciences

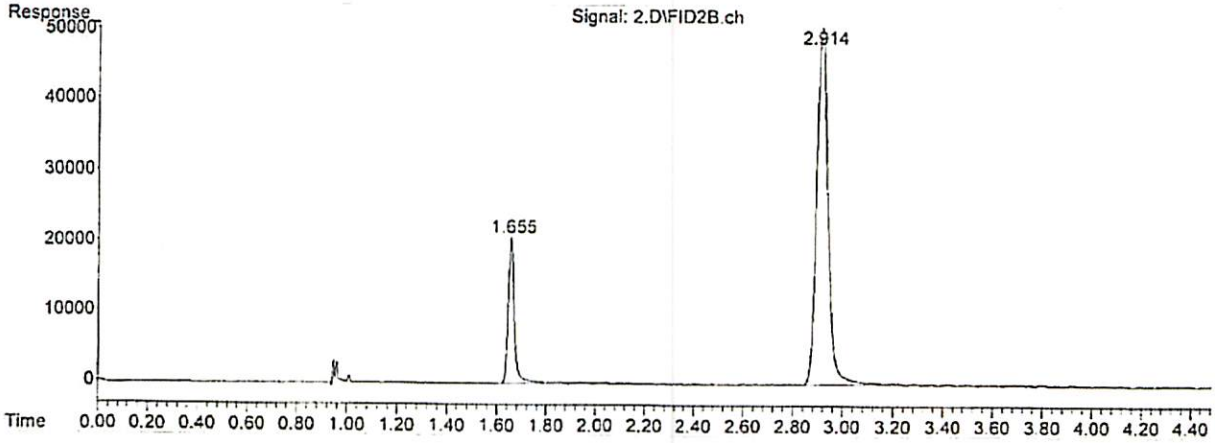
Sample Name	0.050 STD	Instrument Name	GC-2
Misc Info	RANGE (0.047-0.052)		
Tray/Vial	1/2	Operator	KP
Date Acquired	12/22/2014 8:04	Acq. Method File	ALCOHOL.M
Data File Name	2.D	Last Calibrated	Mon Dec 22 08:09:04 2014
Data Path	C:\MSDCHEM\1\DATA\DECEMBER 2014\122214_ETOH CALIBRATION CURVE\2.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.496	0.020	1621381
ETHANOL	1.518	0.052	351547

BAC-2



Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	2.914	1639481
ETHANOL #2	1.655	360243

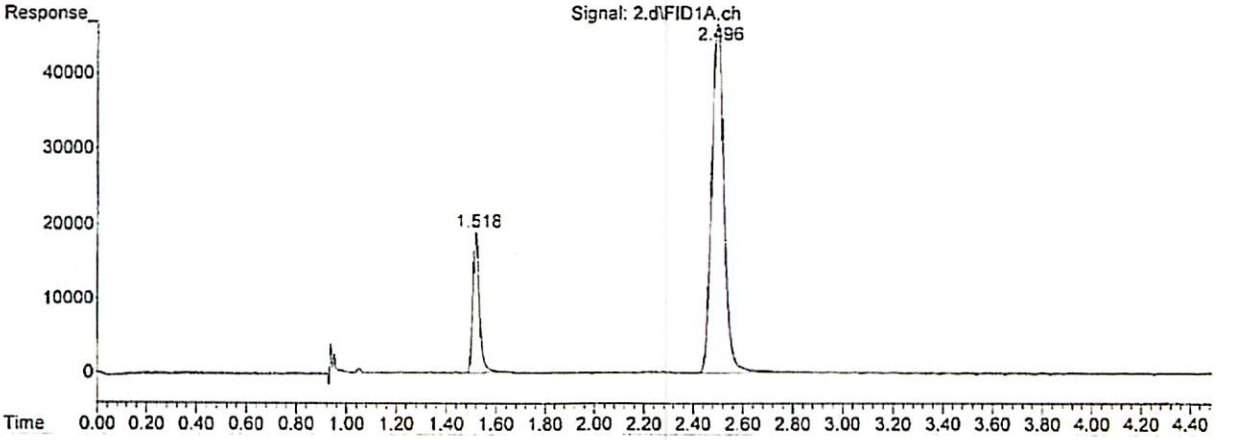
Printed on: Mon Dec 22 08:09:12 2014

KP

Harris County Institute of Forensic Sciences

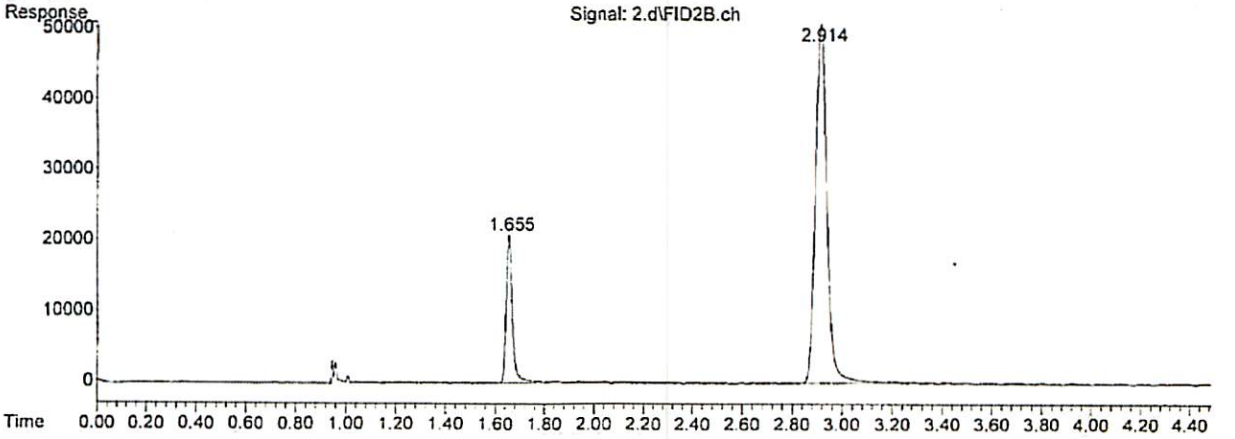
Sample Name	0.050 STD	Instrument Name	GC-2
Misc Info	RANGE (0.047-0.052)		
Tray/Vial	1/2	Operator	KP
Date Acquired	12/22/2014 8:04	Acq. Method File	ALCOHOL.M
Data File Name	2.D	Last Calibrated	Mon Dec 22 08:40:52 2014
Data Path	C:\msdchem\1\data\DECEMBER 2014\122214_ETOH CALIBRATION CURVE\2.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.496	0.020	1621381
ETHANOL	1.518	0.047	351547

BAC-2



Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	2.914	1639481
ETHANOL #2	1.655	360243

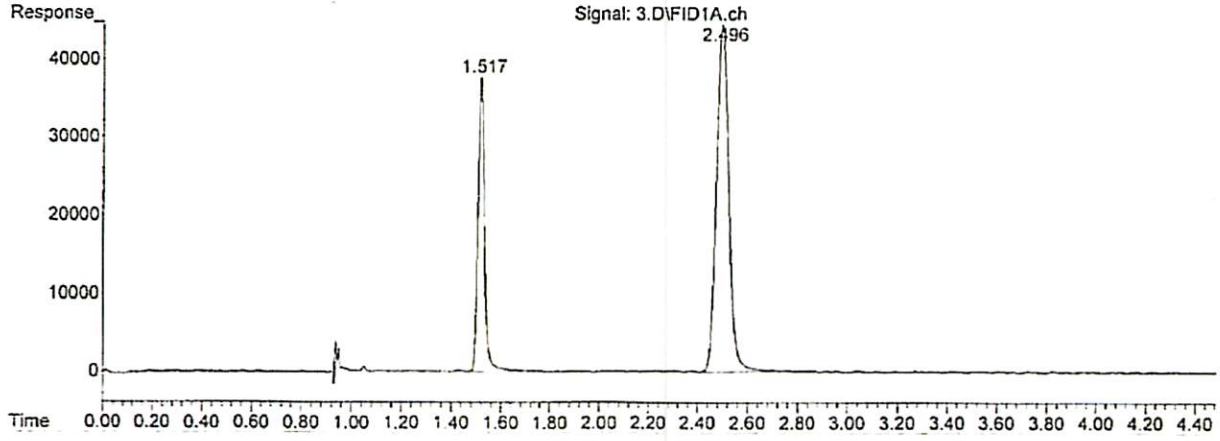
Printed on: Mon Dec 22 08:50:18 2014

KP

Harris County Institute of Forensic Sciences

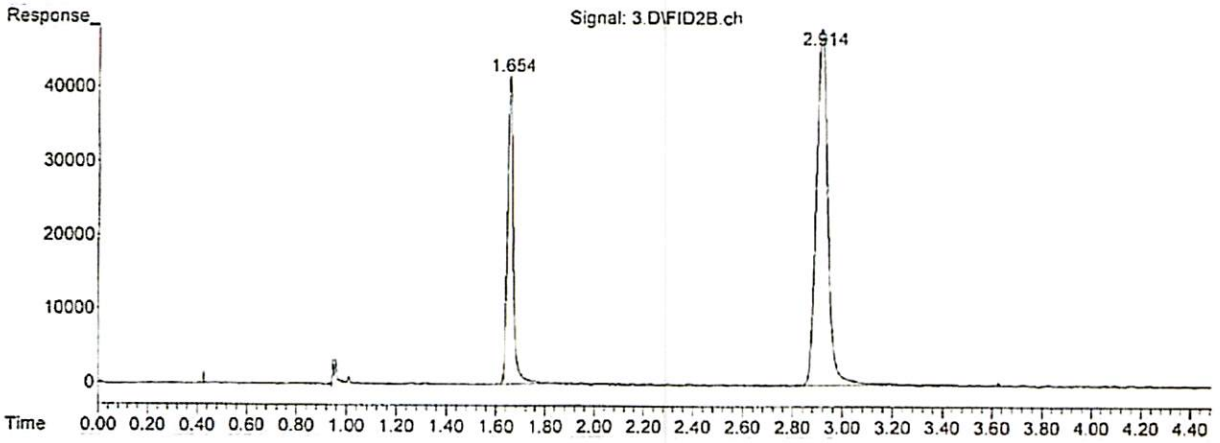
Sample Name	0.100 STD	Instrument Name	GC-2
Misc Info	RANGE (0.095-0.105)		
Tray/Vial	1/3	Operator	KP
Date Acquired	12/22/2014 8:12	Acq. Method File	ALCOHOL.M
Data File Name	3.D	Last Calibrated	Mon Dec 22 08:17:00 2014
Data Path	C:\MSDCHEM\1\DATA\DECEMBER 2014\122214_ETOH CALIBRATION CURVE\3.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.496	0.020	1546187
ETHANOL	1.517	0.108	690646

BAC-2



Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	2.914	1554710
ETHANOL #2	1.654	687015

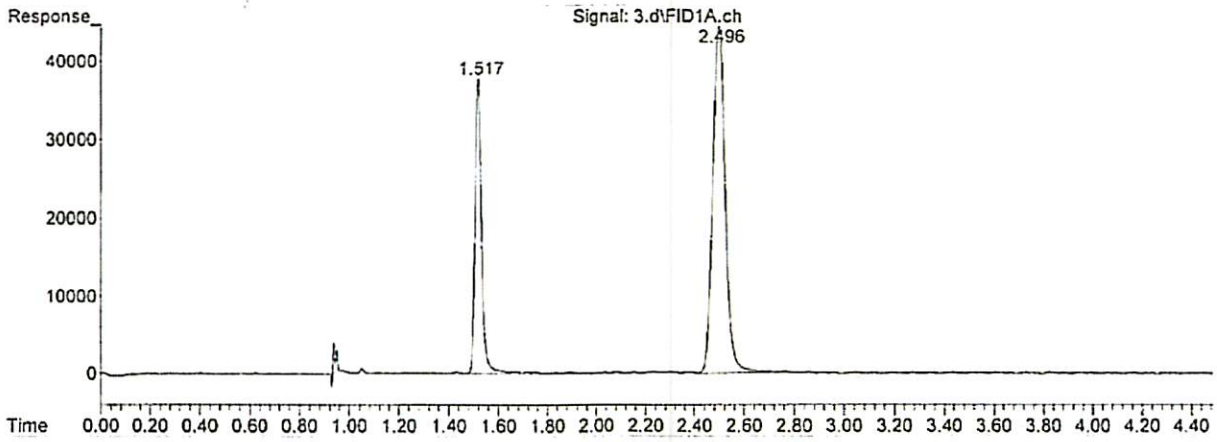
Printed on: Mon Dec 22 08:17:08 2014

KP

Harris County Institute of Forensic Sciences

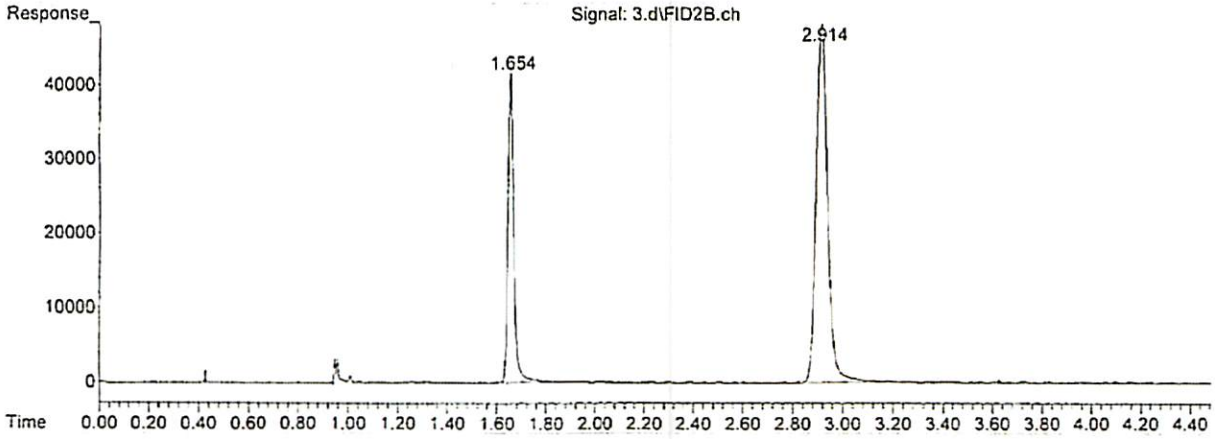
Sample Name	0.100 STD	Instrument Name	GC-2
Misc Info	RANGE (0.095-0.105)		
Tray/Vial	1/3	Operator	KP
Date Acquired	12/22/2014 8:12	Acq. Method File	ALCOHOL.M
Data File Name	3.D	Last Calibrated	Mon Dec 22 08:40:52 2014
Data Path	C:\msdchem\1\data\DECEMBER 2014\122214_ETOH CALIBRATION CURVE\3.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.496	0.020	1546187
ETHANOL	1.517	0.098	690646

BAC-2



Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	2.914	1554710
ETHANOL #2	1.654	687015

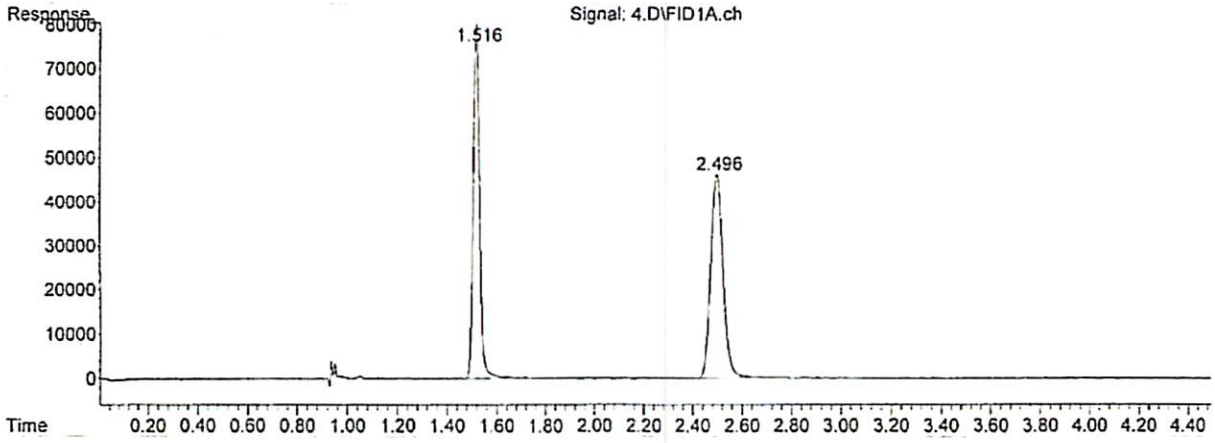
Printed on: Mon Dec 22 08:50:20 2014

KP

Harris County Institute of Forensic Sciences

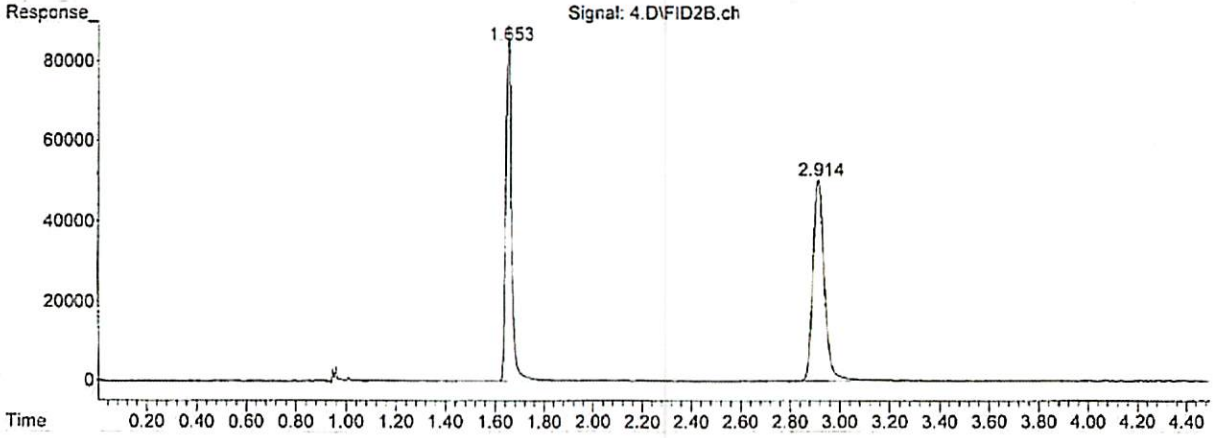
Sample Name	0.200 STD	Instrument Name	GC-2
Misc Info	RANGE (0.190-0.210)		
Tray/Vial	1/4	Operator	KP
Date Acquired	12/22/2014 8:19	Acq. Method File	ALCOHOL.M
Data File Name	4.D	Last Calibrated	Mon Dec 22 08:24:57 2014
Data Path	C:\MSDCHEM\1\DATA\DECEMBER 2014\122214_ETOH CALIBRATION CURVE\4.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.495	0.020	1588413
ETHANOL	1.516	0.216	1420002

BAC-2



Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	2.914	1622613
ETHANOL #2	1.653	1432599

Printed on: Mon Dec 22 08:25:05 2014

A. It's outside of my ability to report either of those values.
Q. Okay. So, you can't report them if they're outside of the 5-percent lab policy, right?
A. Not at this point, no.
Q. And that goes to -- I mean, for accreditation, you've got to have certain policies that are required to be followed, right?
A. Yes.
Q. Okay. And so, this is December 22nd. And for that batch, there's more -- you're talking about the importance of the quality controls to be within the tolerance range, right?
A. Yes.
Q. And you admitted that there were some problems, that there were some quality controls that were outside of the tolerance range?
A. No, I did not admit to that.
Q. Okay. So, this is Defense Exhibit No. 4. And here we have December 22, right?
A. Yes.
Q. Same day that you analyzed the second analysis, which was a .139, right?
A. Yes.
Q. And you see this is the Vial 1 of 1. This

is a .025 standard, right?
A. Yes.
Q. And so, here's (indicating) the acceptable tolerance range, right?
A. Yes.
Q. .022 to .027, right?
A. Yes.
Q. And let's look and see -- we have .027, right? So, it's at the top, within the tolerance range, right?
A. Yes. I also -- can I explain something about that chromatogram?
Q. I was asking a yes-or-no question.
THE COURT: Can she please answer it for my purposes?
(Affirmative response)
THE COURT: Thank you. I appreciate it.
THE WITNESS: Can you put it back on the screen.
(Mr. Flood complies)
THE WITNESS: So, the way that our instrument works is, we will -- I'll run that calibration curve, which consists of the six standards that I referred to earlier. And what

EXHIBIT #5

CALIBRATION CURVE & CHROMATOGRAMS

DEFENDANTS:

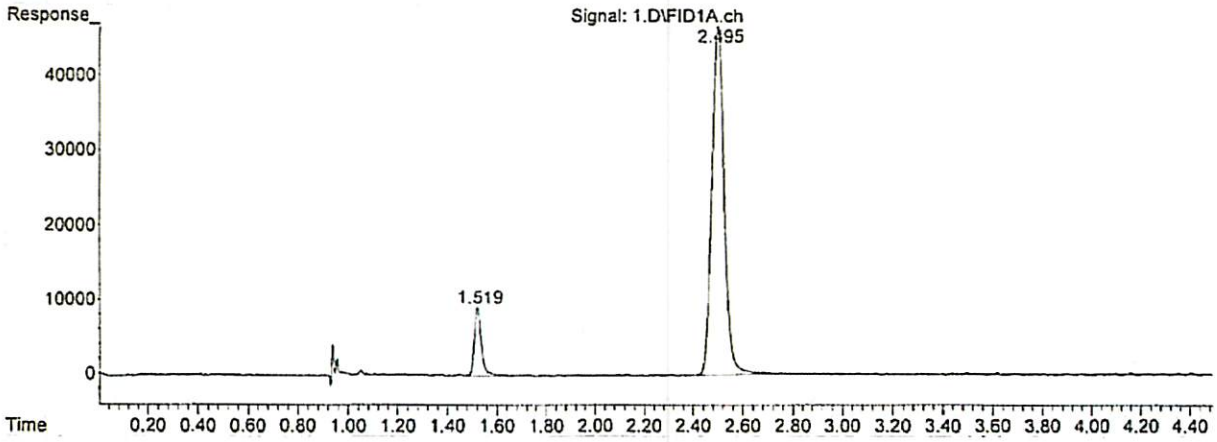
DANIEL IMRECKE
JOSE DELACRUZ

(Court transcripts for each case located in section 4)

Harris County Institute of Forensic Sciences

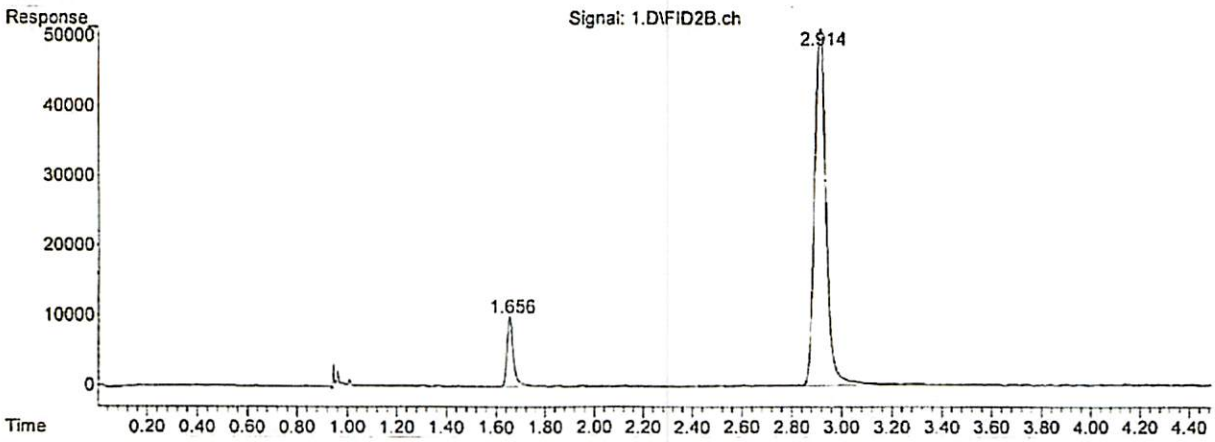
Sample Name	0.025 STD	Instrument Name	GC-2
Misc Info	RANGE (0.022-0.027)		
Tray/Vial	1/1	Operator	KP
Date Acquired	12/22/2014 7:56	Acq. Method File	ALCOHOL.M
Data File Name	1.D	Last Calibrated	Mon Dec 22 08:01:07 2014
Data Path	C:\MSDCHEM\1\DATA\DECEMBER 2014\122214_ETOH CALIBRATION CURVE\1.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.495	0.020	1630036
ETHANOL	1.519	0.027	181911

BAC-2



Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	2.914	1648580
ETHANOL #2	1.656	173775

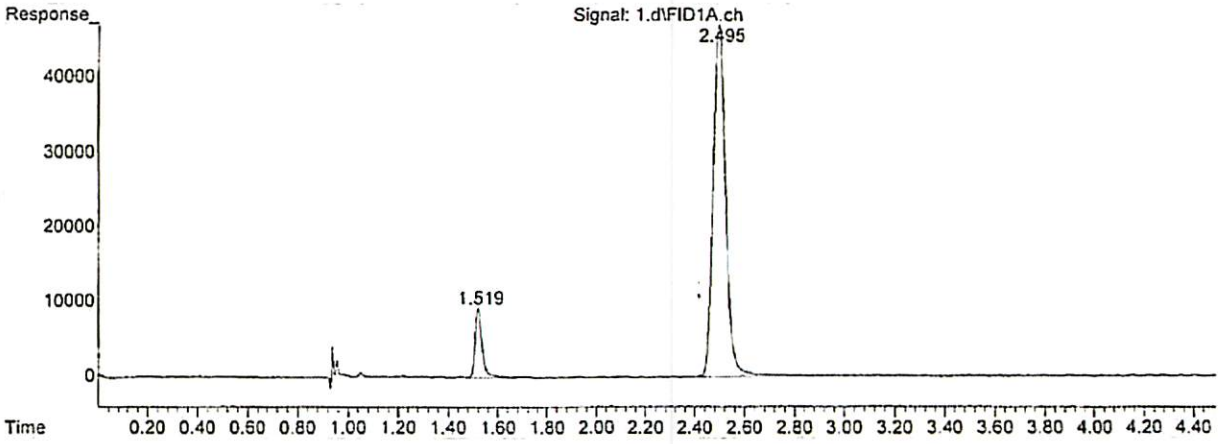
Printed on: Mon Dec 22 08:01:15 2014

KP

Harris County Institute of Forensic Sciences

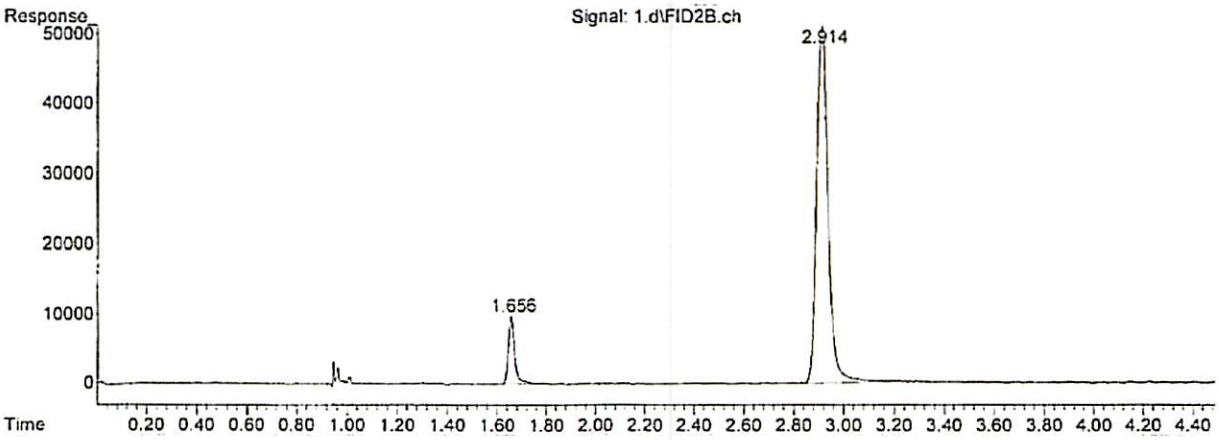
Sample Name	0.025 STD	Instrument Name	GC-2
Misc Info	RANGE (0.022-0.027)		
Tray/Vial	1/1	Operator	KP
Date Acquired	12/22/2014 7:56	Acq. Method File	ALCOHOL.M
Data File Name	1.D	Last Calibrated	Mon Dec 22 08:40:52 2014
Data Path	C:\msdchem\1\data\DECEMBER 2014\122214_ETOH CALIBRATION CURVE\1.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.495	0.020	1630036
ETHANOL	1.519	0.024	181911

BAC-2



Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	2.914	1648580
ETHANOL #2	1.656	173775

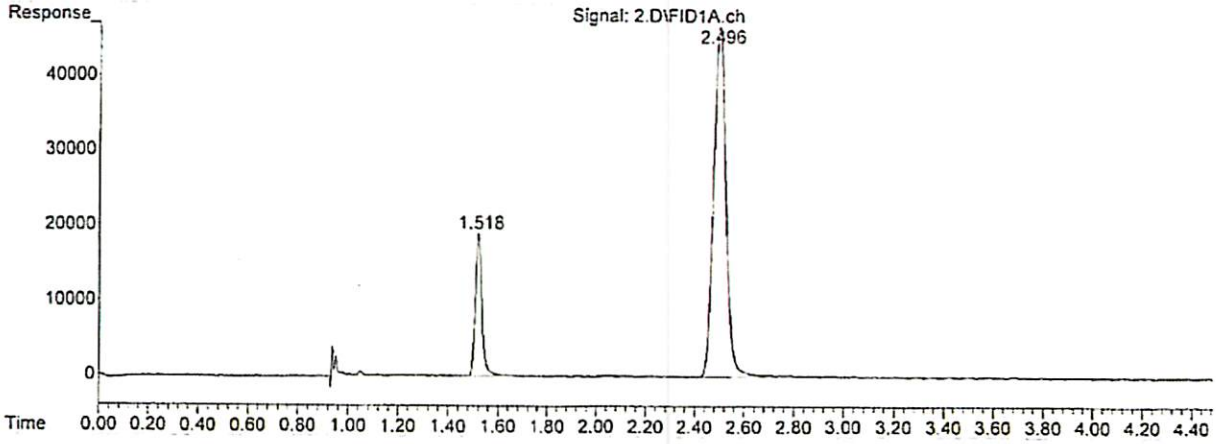
Printed on: Mon Dec 22 08:50:16 2014

KP

Harris County Institute of Forensic Sciences

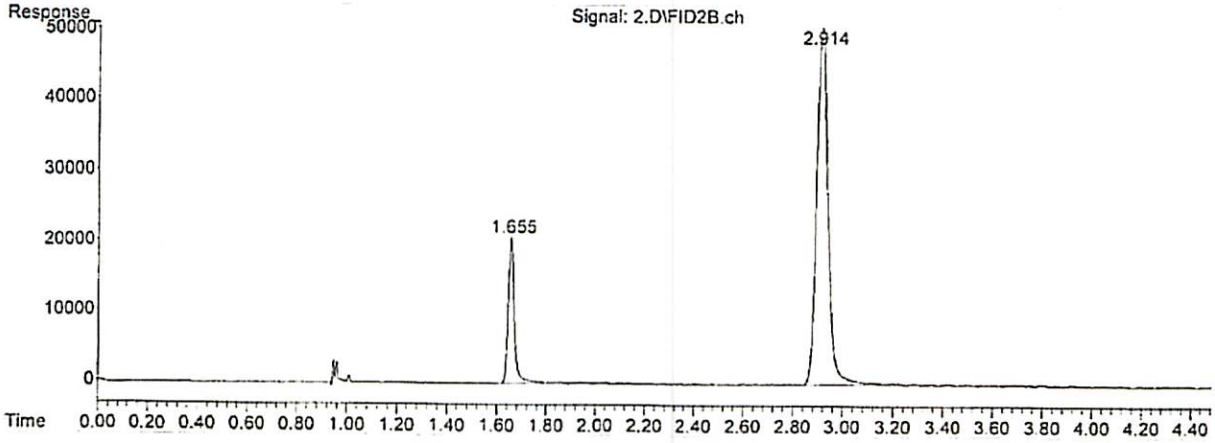
Sample Name	0.050 STD	Instrument Name	GC-2
Misc Info	RANGE (0.047-0.052)		
Tray/Vial	1/2	Operator	KP
Date Acquired	12/22/2014 8:04	Acq. Method File	ALCOHOL.M
Data File Name	2.D	Last Calibrated	Mon Dec 22 08:09:04 2014
Data Path	C:\MSDCHEM\1\DATA\DECEMBER 2014\122214_ETOH CALIBRATION CURVE\2.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.496	0.020	1621381
ETHANOL	1.518	0.052	351547

BAC-2



Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	2.914	1639481
ETHANOL #2	1.655	360243

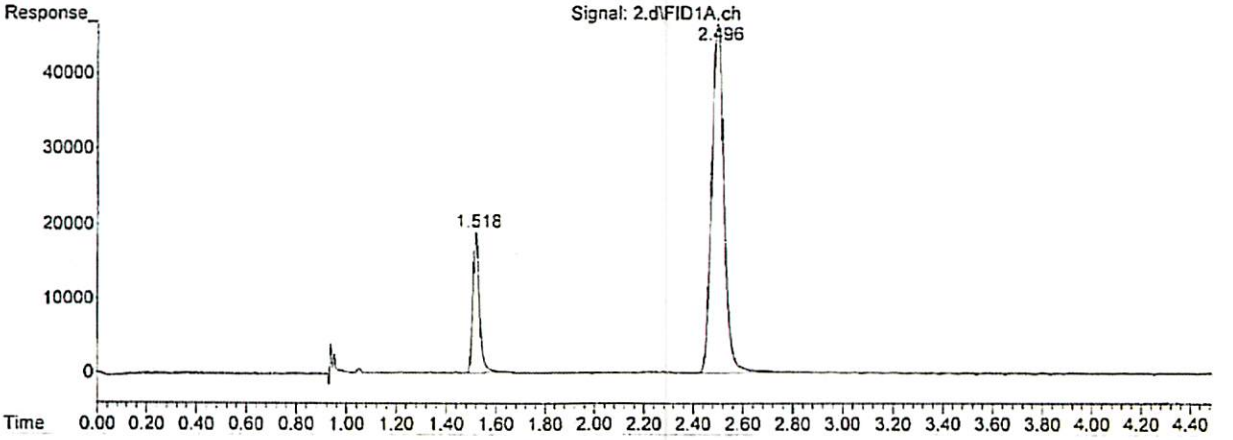
Printed on: Mon Dec 22 08:09:12 2014

KP

Harris County Institute of Forensic Sciences

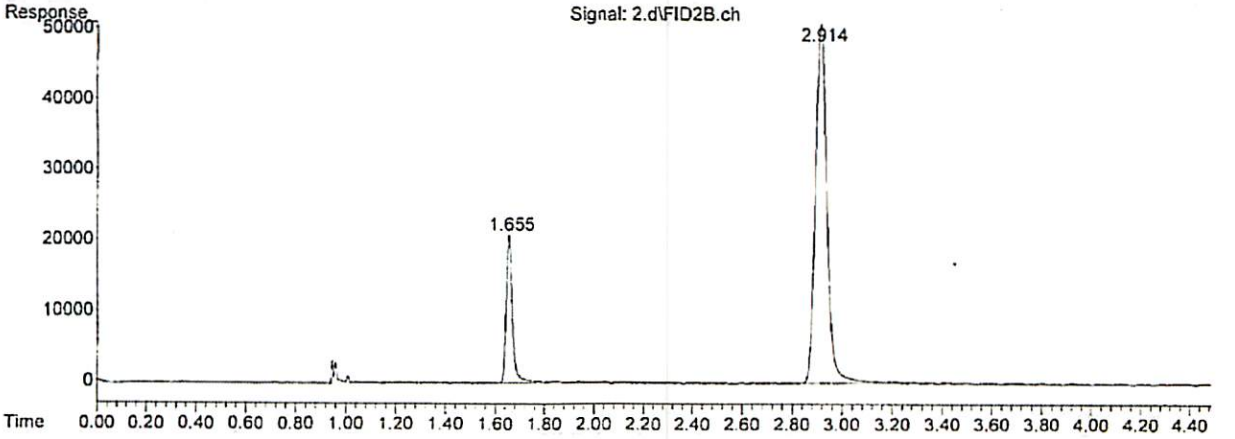
Sample Name	0.050 STD	Instrument Name	GC-2
Misc Info	RANGE (0.047-0.052)		
Tray/Vial	1/2	Operator	KP
Date Acquired	12/22/2014 8:04	Acq. Method File	ALCOHOL.M
Data File Name	2.D	Last Calibrated	Mon Dec 22 08:40:52 2014
Data Path	C:\msdchem\1\data\DECEMBER 2014\122214_ETOH CALIBRATION CURVE\2.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.496	0.020	1621381
ETHANOL	1.518	0.047	351547

BAC-2



Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	2.914	1639481
ETHANOL #2	1.655	360243

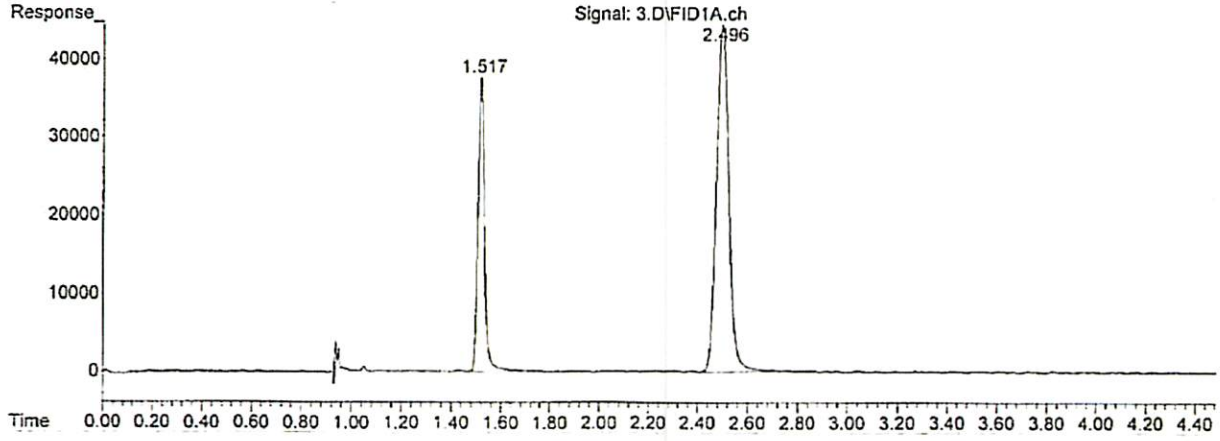
Printed on: Mon Dec 22 08:50:18 2014

KP

Harris County Institute of Forensic Sciences

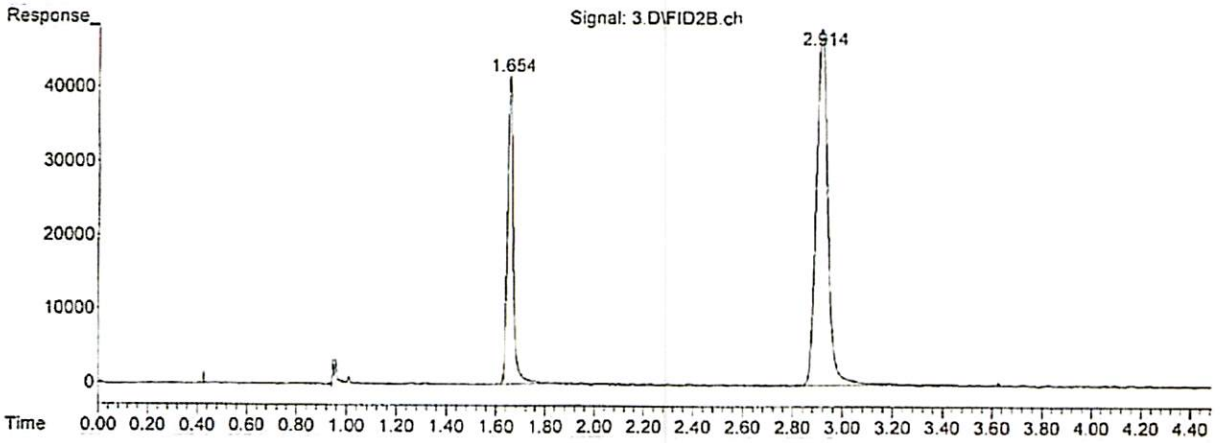
Sample Name	0.100 STD	Instrument Name	GC-2
Misc Info	RANGE (0.095-0.105)		
Tray/Vial	1/3	Operator	KP
Date Acquired	12/22/2014 8:12	Acq. Method File	ALCOHOL.M
Data File Name	3.D	Last Calibrated	Mon Dec 22 08:17:00 2014
Data Path	C:\MSDCHEM\1\DATA\DECEMBER 2014\122214_ETOH CALIBRATION CURVE\3.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.496	0.020	1546187
ETHANOL	1.517	0.108	690646

BAC-2



Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	2.914	1554710
ETHANOL #2	1.654	687015

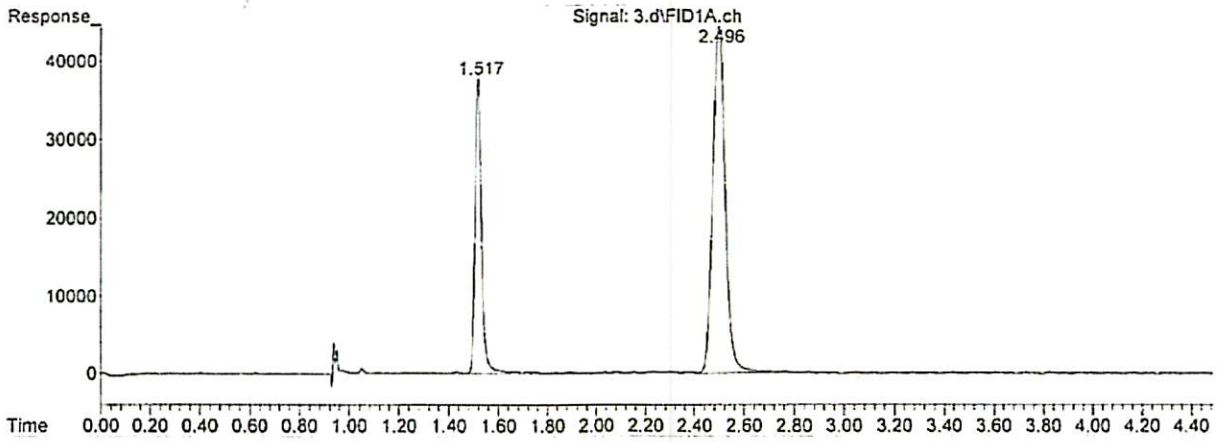
Printed on: Mon Dec 22 08:17:08 2014

KP

Harris County Institute of Forensic Sciences

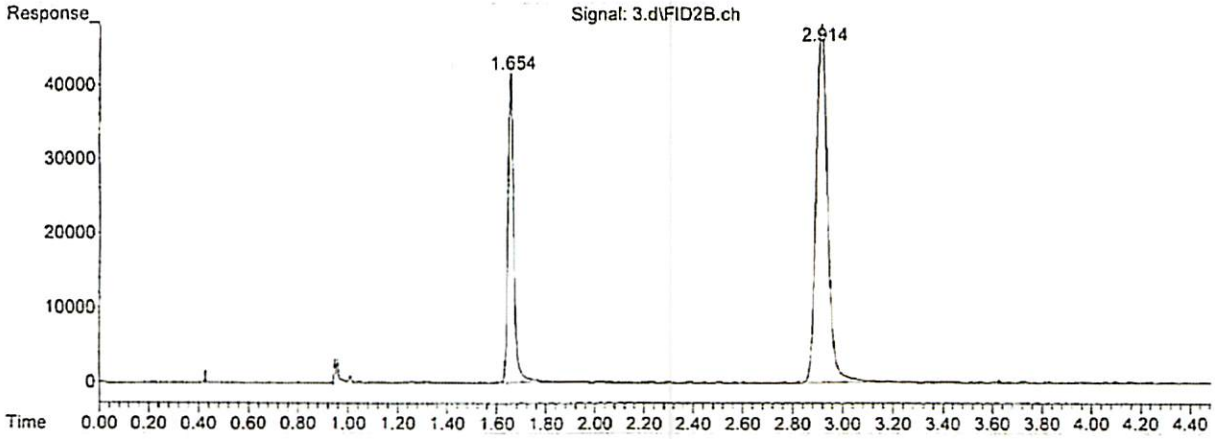
Sample Name	0.100 STD	Instrument Name	GC-2
Misc Info	RANGE (0.095-0.105)		
Tray/Vial	1/3	Operator	KP
Date Acquired	12/22/2014 8:12	Acq. Method File	ALCOHOL.M
Data File Name	3.D	Last Calibrated	Mon Dec 22 08:40:52 2014
Data Path	C:\msdchem\1\data\DECEMBER 2014\122214_ETOH CALIBRATION CURVE\3.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.496	0.020	1546187
ETHANOL	1.517	0.098	690646

BAC-2



Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	2.914	1554710
ETHANOL #2	1.654	687015

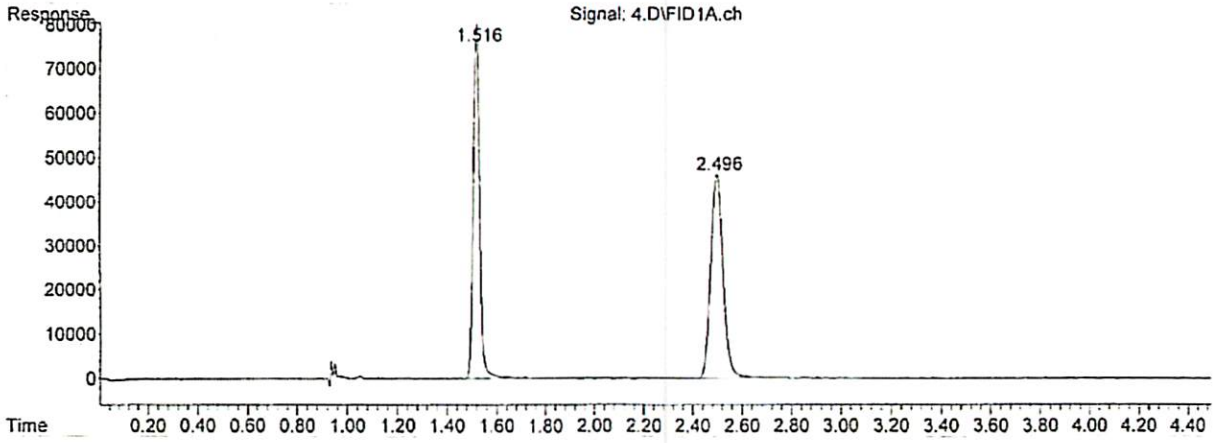
Printed on: Mon Dec 22 08:50:20 2014

KP

Harris County Institute of Forensic Sciences

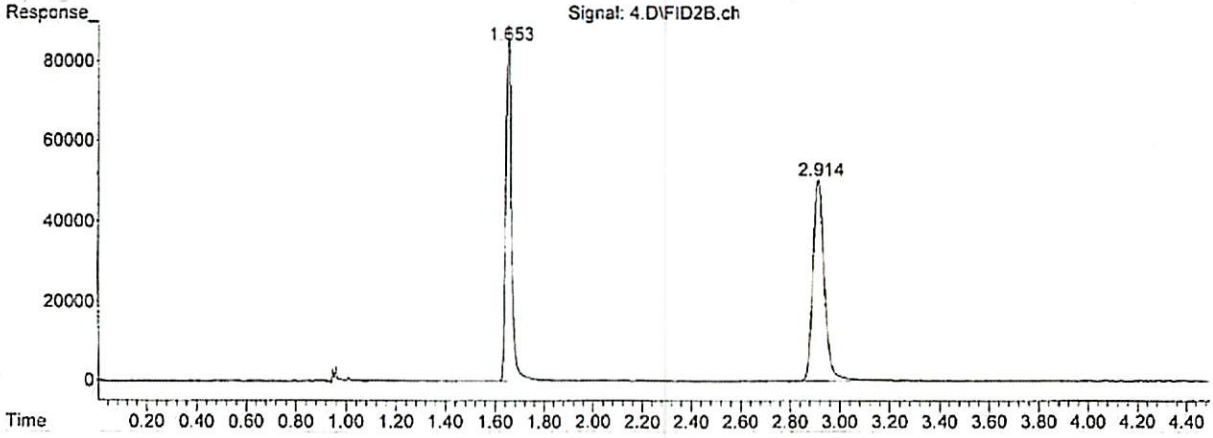
Sample Name	0.200 STD	Instrument Name	GC-2
Misc Info	RANGE (0.190-0.210)		
Tray/Vial	1/4	Operator	KP
Date Acquired	12/22/2014 8:19	Acq. Method File	ALCOHOL.M
Data File Name	4.D	Last Calibrated	Mon Dec 22 08:24:57 2014
Data Path	C:\MSDCHEM\1\DATA\DECEMBER 2014\122214_ETOH CALIBRATION CURVE\4.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.495	0.020	1588413
ETHANOL	1.516	0.216	1420002

BAC-2



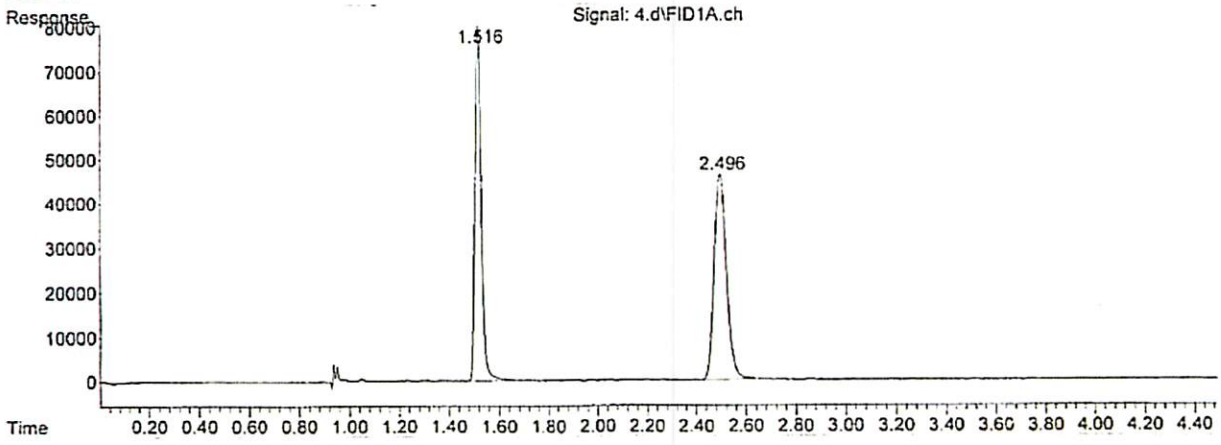
Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	2.914	1622613
ETHANOL #2	1.653	1432599

Printed on: Mon Dec 22 08:25:05 2014

Harris County Institute of Forensic Sciences

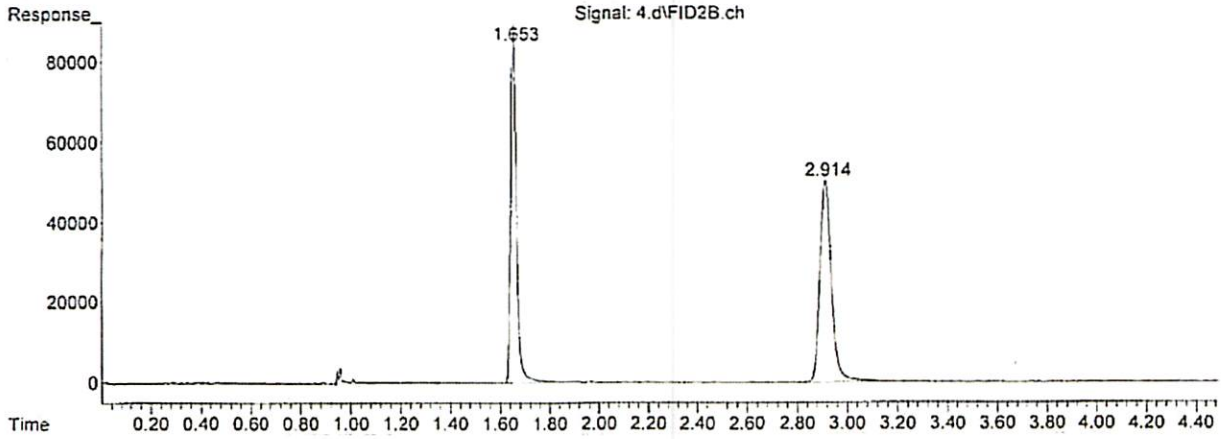
Sample Name	0.200 STD	Instrument Name	GC-2
Misc Info	RANGE (0.190-0.210)		
Tray/Vial	1/4	Operator	KP
Date Acquired	12/22/2014 8:19	Acq. Method File	ALCOHOL.M
Data File Name	4.D	Last Calibrated	Mon Dec 22 08:40:52 2014
Data Path	C:\msdchem\1\data\DECEMBER 2014\122214_ETOH CALIBRATION CURVE\4.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.495	0.020	1588413
ETHANOL	1.516	0.197	1420002

BAC-2



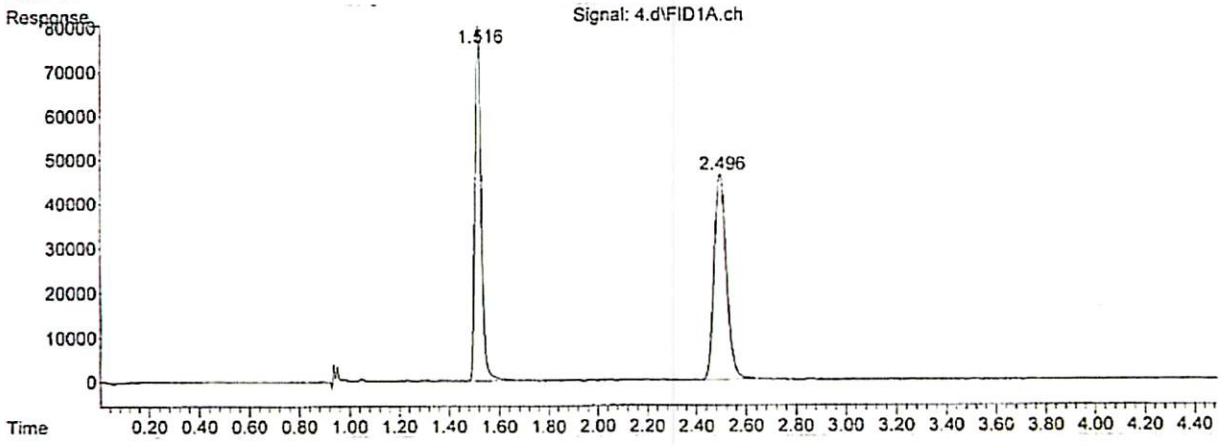
Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	2.914	1622613
ETHANOL #2	1.653	1432599

Printed on: Mon Dec 22 08:50:22 2014

Harris County Institute of Forensic Sciences

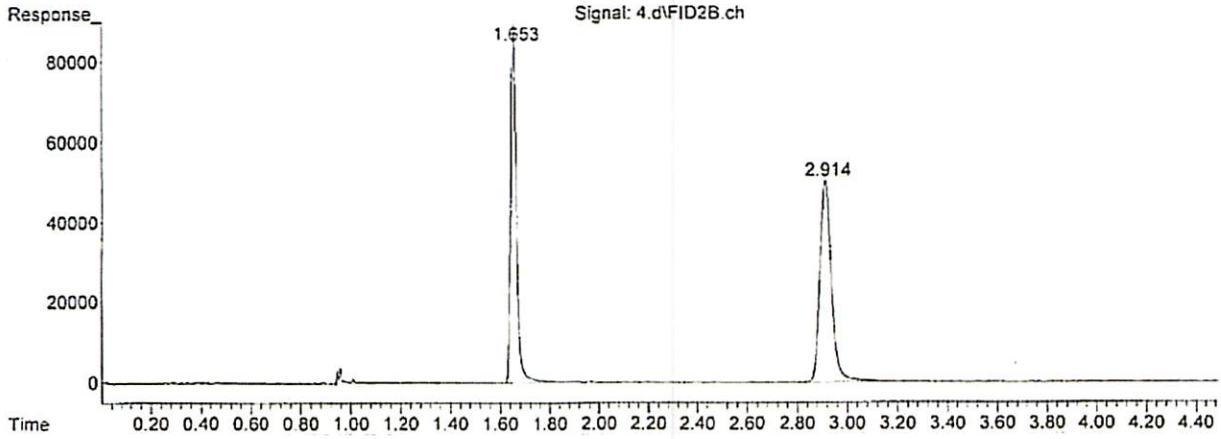
Sample Name	0.200 STD	Instrument Name	GC-2
Misc Info	RANGE (0.190-0.210)		
Tray/Vial	1/4	Operator	KP
Date Acquired	12/22/2014 8:19	Acq. Method File	ALCOHOL.M
Data File Name	4.D	Last Calibrated	Mon Dec 22 08:40:52 2014
Data Path	C:\msdchem\1\data\DECEMBER 2014\122214_ETOH CALIBRATION CURVE\4.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.495	0.020	1588413
ETHANOL	1.516	0.197	1420002

BAC-2



Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	2.914	1622613
ETHANOL #2	1.653	1432599

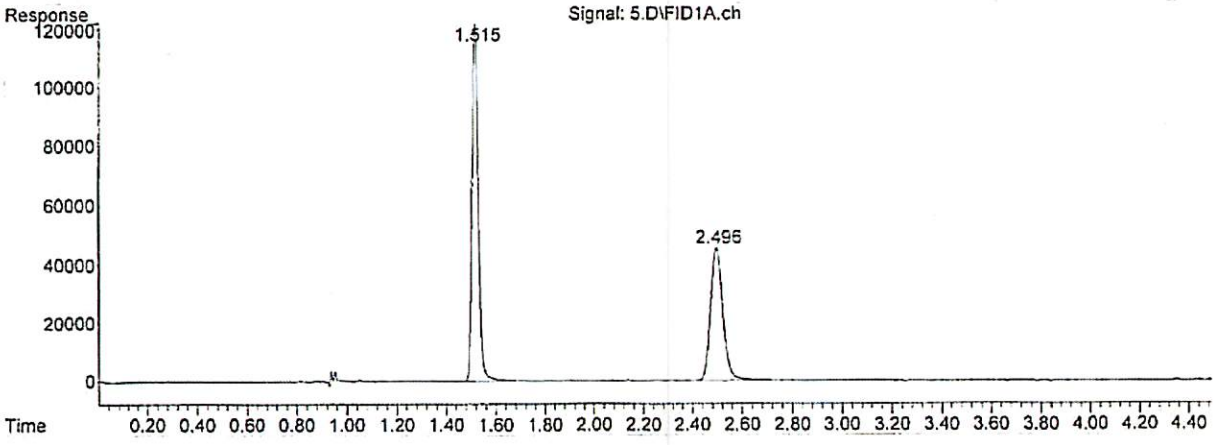
Printed on: Mon Dec 22 08:50:22 2014

KP

Harris County Institute of Forensic Sciences

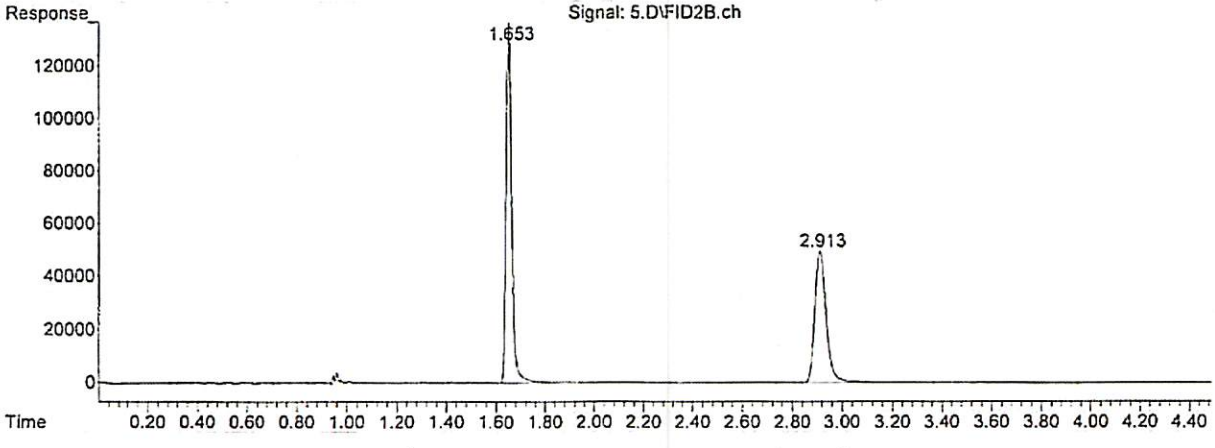
Sample Name	0.300 STD	Instrument Name	GC-2
Misc Info	RANGE (0.285-0.315)		
Tray/Vial	1/5	Operator	KP
Date Acquired	12/22/2014 8:27	Acq. Method File	ALCOHOL.M
Data File Name	5.D	Last Calibrated	Mon Dec 22 08:32:54 2014
Data Path	C:\MSDCHEM\1\DATA\DECEMBER 2014\122214_ETOH CALIBRATION CURVE\5.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.496	0.020	1582562
ETHANOL	1.515	0.323	2129981

BAC-2



Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	2.913	1591655
ETHANOL #2	1.653	2170272

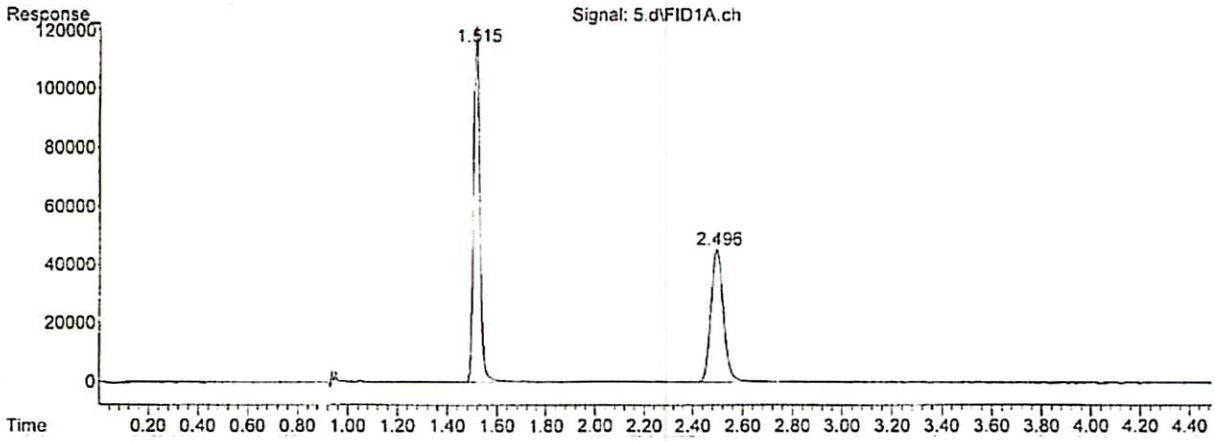
Printed on: Mon Dec 22 08:33:02 2014

KP

Harris County Institute of Forensic Sciences

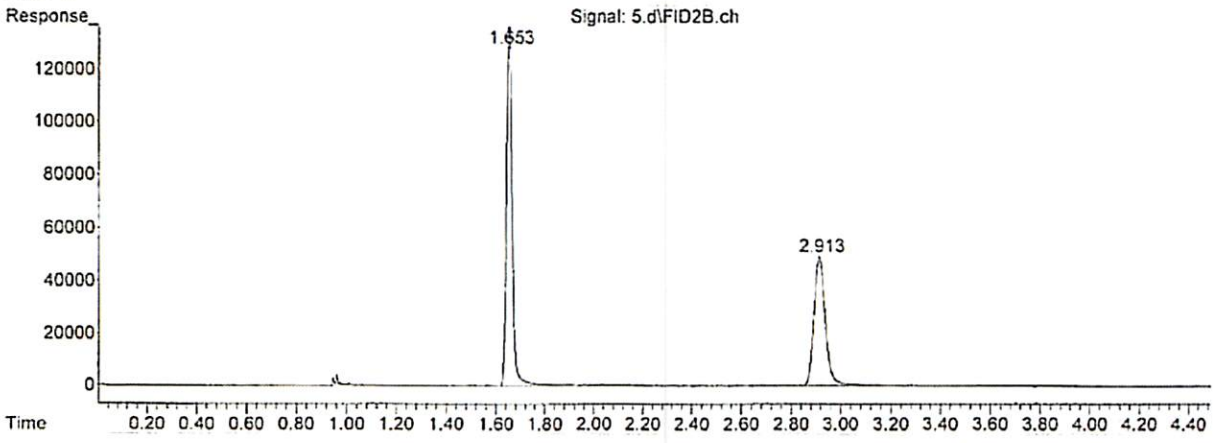
Sample Name	0.300 STD	Instrument Name	GC-2
Misc Info	RANGE (0.285-0.315)		
Tray/Vial	1/5	Operator	KP
Date Acquired	12/22/2014 8:27	Acq. Method File	ALCOHOL.M
Data File Name	5.D	Last Calibrated	Mon Dec 22 08:40:52 2014
Data Path	C:\msdchem\1\data\DECEMBER 2014\122214_ETOH CALIBRATION CURVE\5.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.496	0.020	1582662
ETHANOL	1.515	0.296	2129981

BAC-2



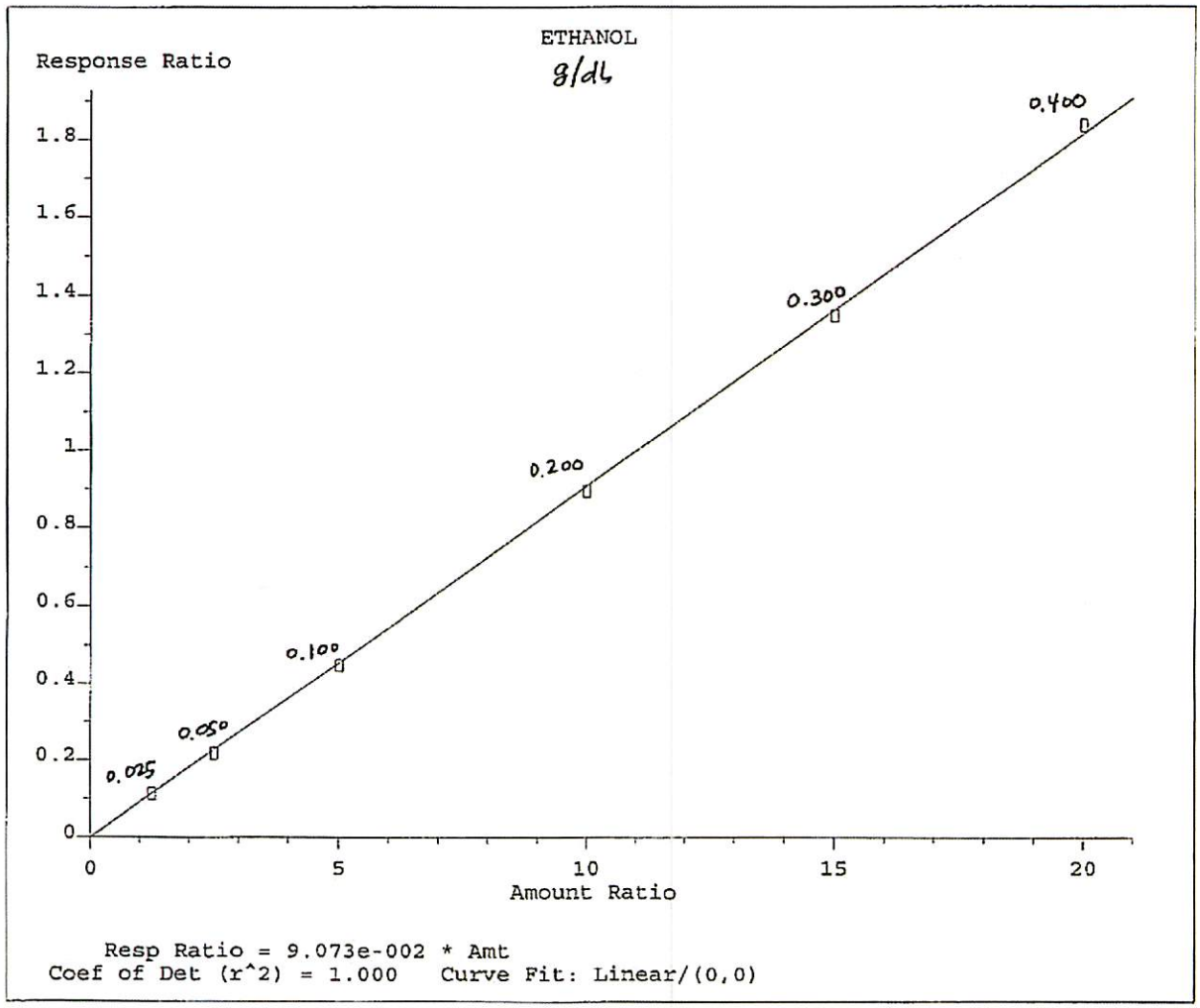
Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	2.913	1591655
ETHANOL #2	1.653	2170272

Printed on: Mon Dec 22 08:50:24 2014

KP

Harris County Institute of Forensic Sciences
Forensic Alcohol Section
Calibration Report

Instrument: GC-2 Analyst : KP
Data Path : C:\msdchem\1\data\DECEMBER 2014\122214_ETOH CALIBRATION CURVE
Seq Path : C:\msdchem\1\sequence\ETOH CALIBRATION CURVE_122214_KP.S
Acquisition Method: C:\MSDCHEM\1\METHODS\ALCOHOL.M
Calibration Date : 12/22/2014 08:40:52 AM



Standard Name	Nominal g/dL	Ethanol Area	n-Propanol Area	Calculated g/dL	Flag
0.025 STD	0.025	181911	1630036	0.025	
0.050 STD	0.050	351547	1621381	0.048	
0.100 STD	0.100	690646	1546187	0.098	
0.200 STD	0.200	1420002	1588413	0.197	
0.300 STD	0.300	2129981	1582662	0.297	
0.400 STD	0.400	3031028	1651215	0.405	

Correlation Coefficient 0.99 or Better
Calibration may be used.

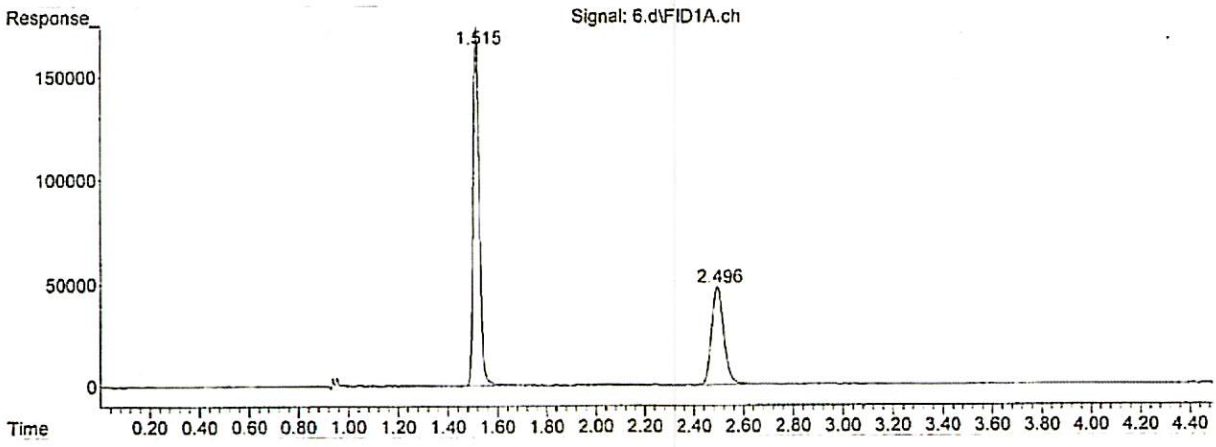
Printed on: Mon Dec 22 08:49:42 2014

KP

Harris County Institute of Forensic Sciences

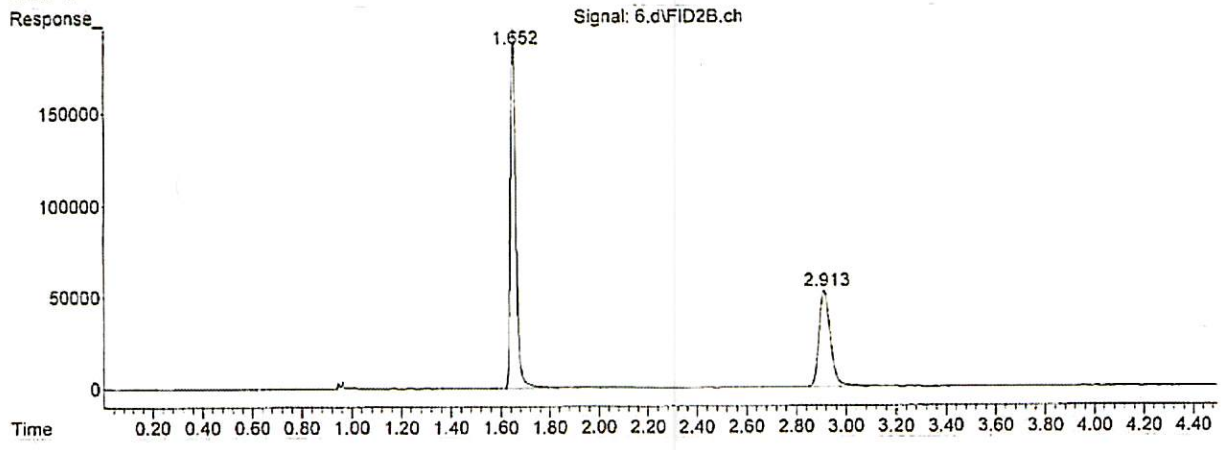
Sample Name	0.400 STD	Instrument Name	GC-2
Misc Info	RANGE (0.380-0.420)		
Tray/Vial	1/6	Operator	KP
Date Acquired	12/22/2014 8:35	Acq. Method File	ALCOHOL.M
Data File Name	6.D	Last Calibrated	Mon Dec 22 08:40:52 2014
Data Path	C:\MSDCHEM\1\DATA\DECEMBER 2014\122214_ETOH CALIBRATION CURVE\6.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.496	0.020	1651215
ETHANOL	1.515	0.404	3031028

BAC-2



Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	2.913	1685842
ETHANOL #2	1.652	3074748

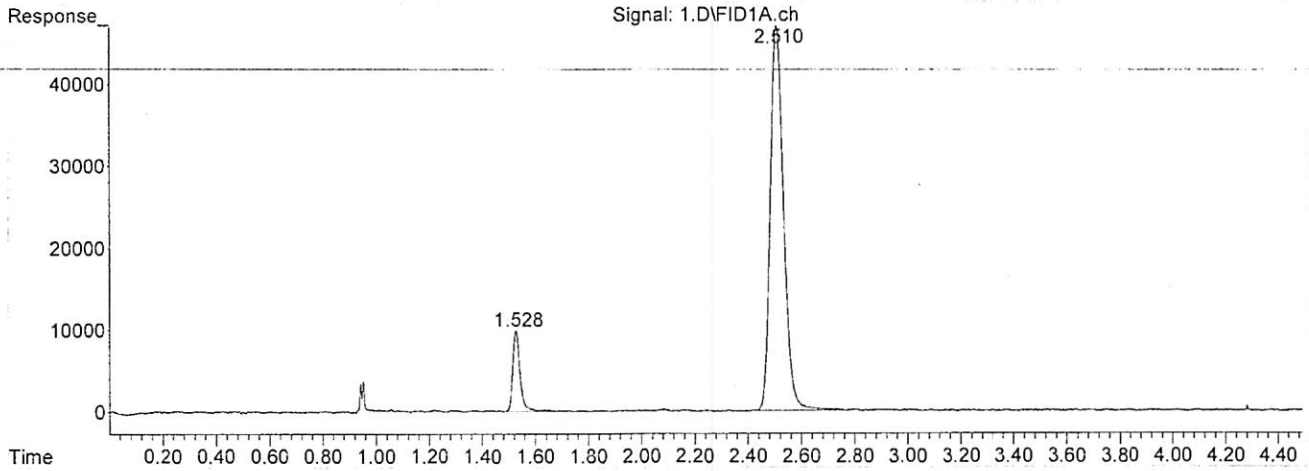
Printed on: Mon Dec 22 08:41:52 2014

RAW DATA

Harris County Institute of Forensic Sciences

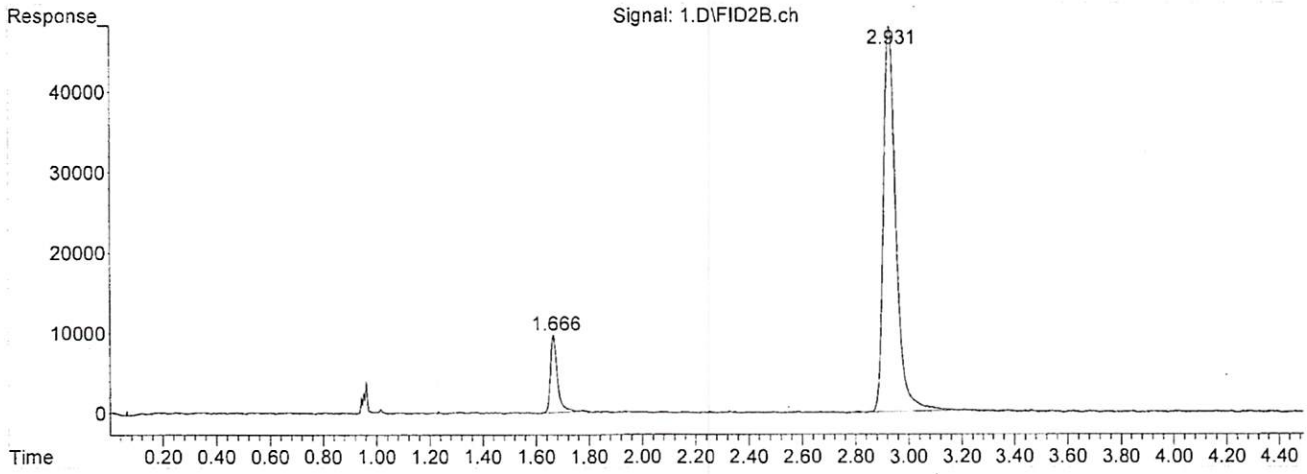
Sample Name	0.025 STD	Instrument Name	GC-2
Misc Info	RANGE (0.022-0.027)		
Tray/Vial	1/1	Operator	AAS
Date Acquired	6/11/2015 10:40	Acq. Method File	ALCOHOL.M
Data File Name	1.D	Last Calibrated	Thu Jun 11 10:45:41 2015
Data Path	C:\MSDCHEM\1\DATA\JUNE 2015\061115_ETOH CALIBRATION CURVE\1.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.510	0.020	1628268
ETHANOL	1.528	0.025	193509

BAC-2



Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	2.931	1586433
ETHANOL #2	1.666	171569

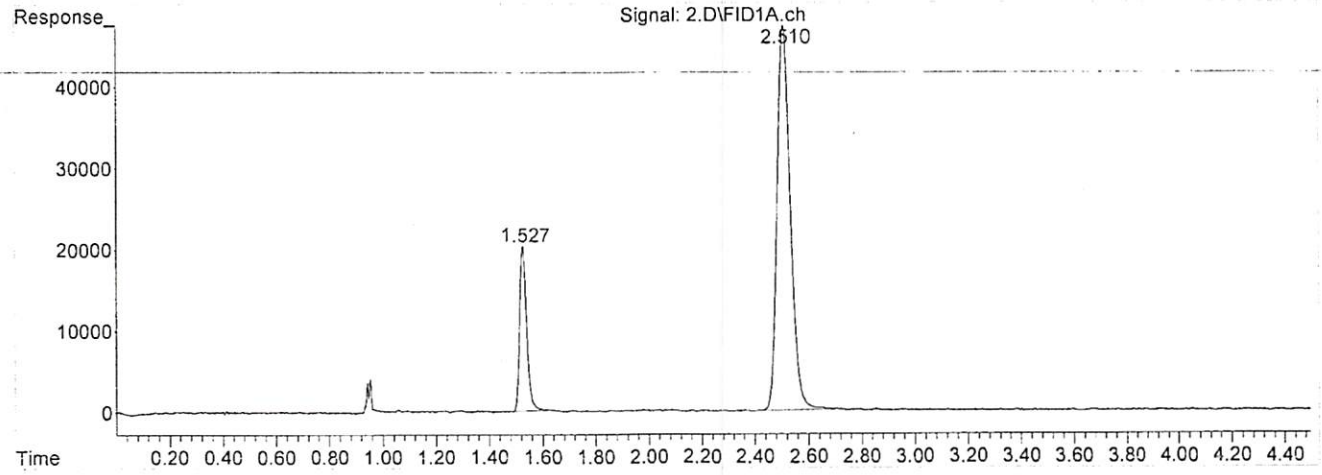
Printed on: Thu Jun 11 10:45:49 2015

RAW DATA AAS

Harris County Institute of Forensic Sciences

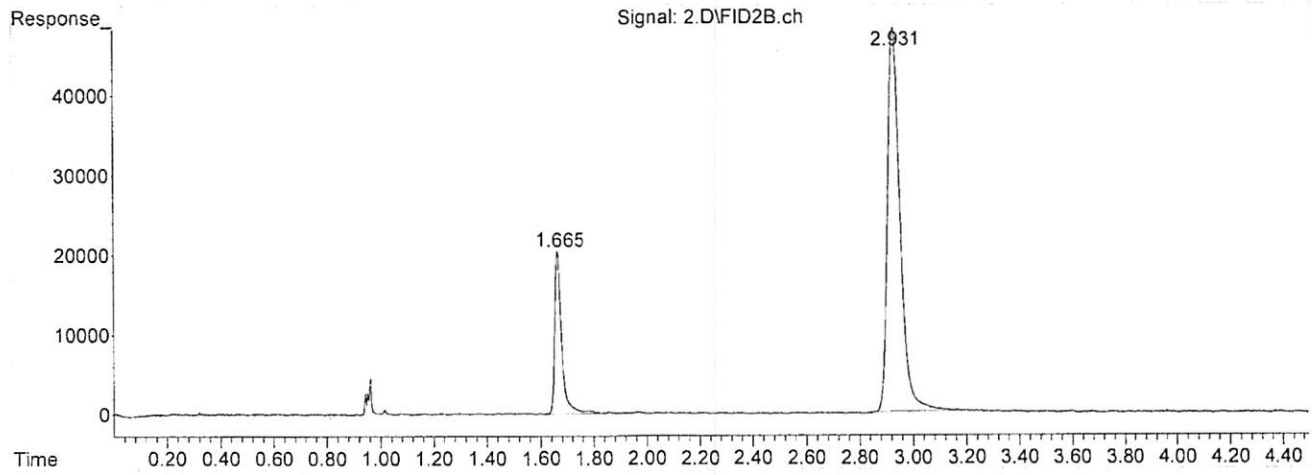
Sample Name	0.050 STD	Instrument Name	GC-2
Misc Info	RANGE (0.047-0.052)		
Tray/Vial	1/2	Operator	AAS
Date Acquired	6/11/2015 10:48	Acq. Method File	ALCOHOL.M
Data File Name	2.D	Last Calibrated	Thu Jun 11 10:53:56 2015
Data Path	C:\MSDCHEM\1\DATA\JUNE 2015\061115_ETOH CALIBRATION CURVE\2.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.510	0.020	1628186
ETHANOL	1.527	0.048	364390

BAC-2



Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	2.931	1583783
ETHANOL #2	1.665	369377

Printed on: Thu Jun 11 10:54:04 2015

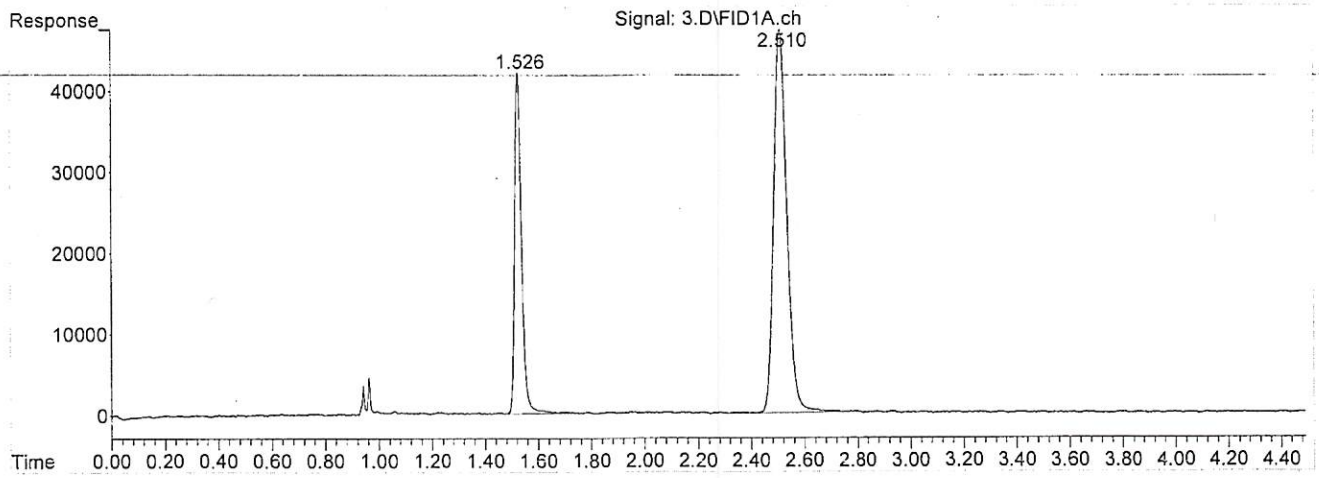
RAW DATA

AAS

Harris County Institute of Forensic Sciences

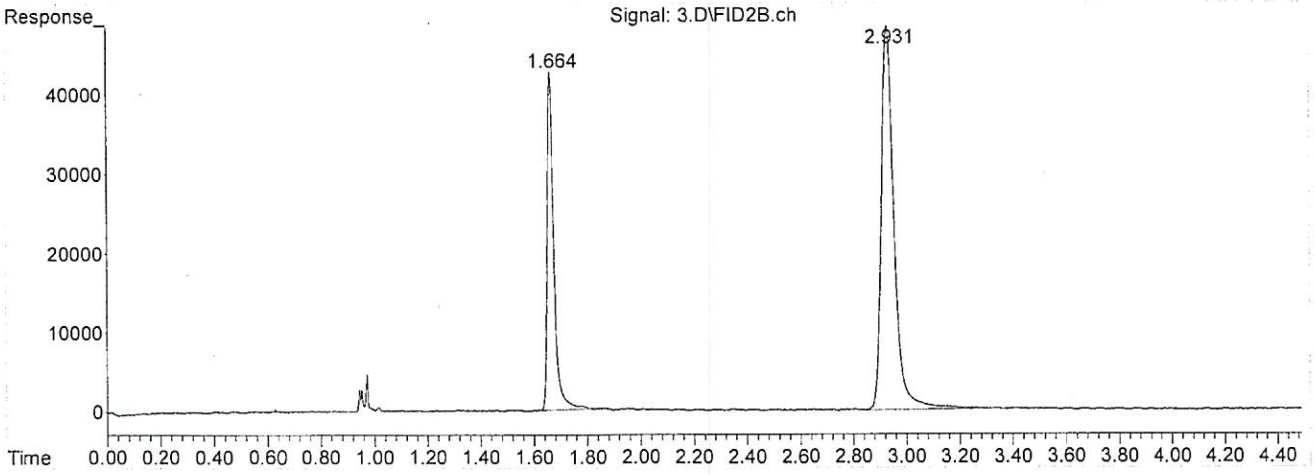
Sample Name	0.100 STD	Instrument Name	GC-2
Misc Info	RANGE (0.095-0.105)		
Tray/Vial	1/3	Operator	AAS
Date Acquired	6/11/2015 10:57	Acq. Method File	ALCOHOL.M
Data File Name	3.D	Last Calibrated	Thu Jun 11 11:02:13 2015
Data Path	C:\MSDCHEM\1\DATA\JUNE 2015\061115_ETOH CALIBRATION CURVE\3.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.510	0.020	1638324
ETHANOL	1.526	0.100	763347

BAC-2



Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	2.931	1624568
ETHANOL #2	1.664	733242

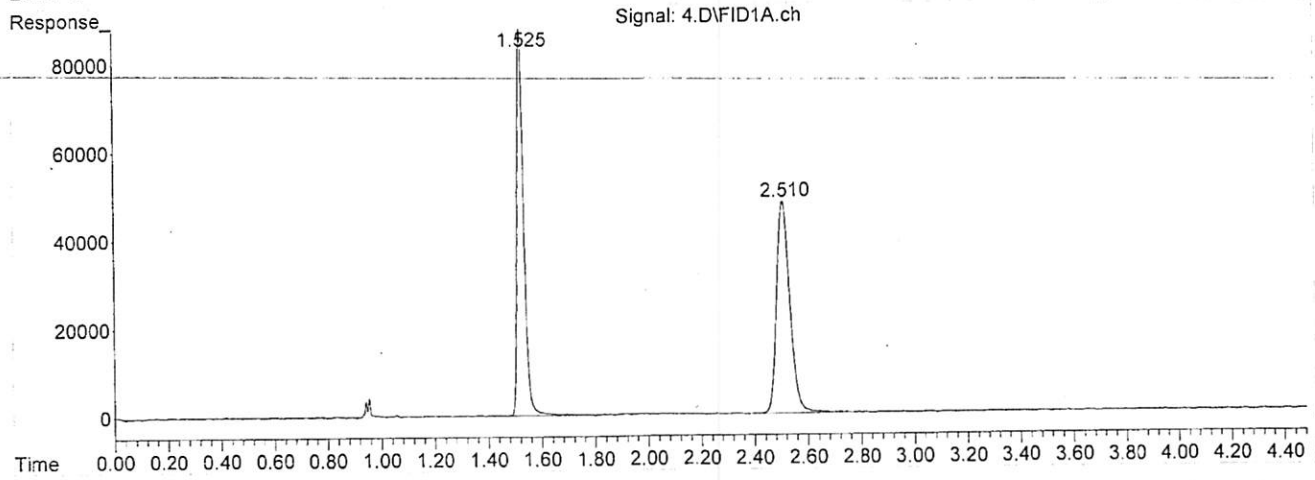
Printed on: Thu Jun 11 11:02:21 2015

RAW DATA

Harris County Institute of Forensic Sciences

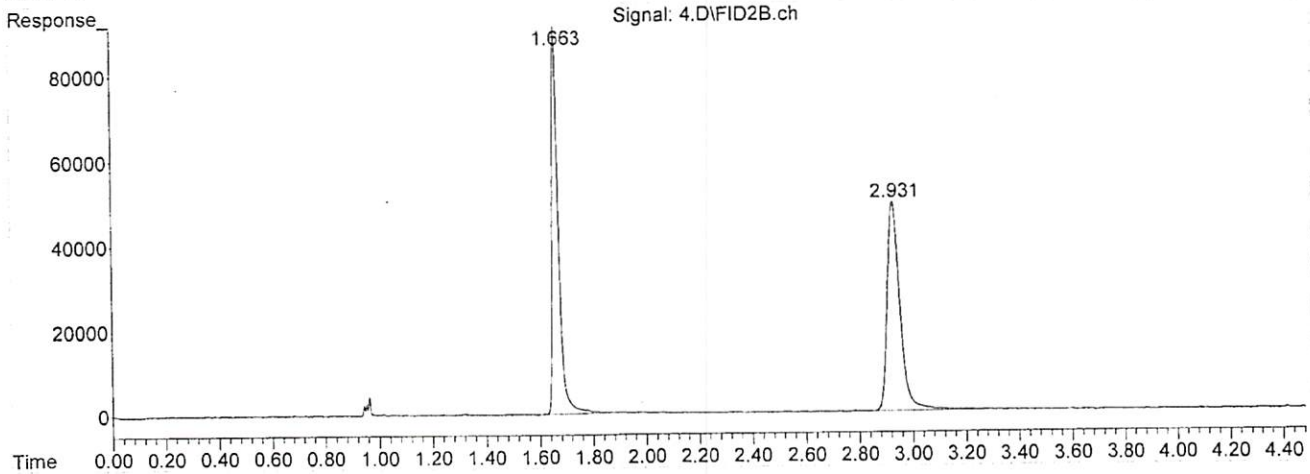
Sample Name	0.200 STD	Instrument Name	GC-2
Misc Info	RANGE (0.190-0.210)		
Tray/Vial	1/4	Operator	AAS
Date Acquired	6/11/2015 11:05	Acq. Method File	ALCOHOL.M
Data File Name	4.D	Last Calibrated	Thu Jun 11 11:10:28 2015
Data Path	C:\MSDCHEM\1\DATA\JUNE 2015\061115_ETOH CALIBRATION CURVE\4.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.510	0.020	1675596
ETHANOL	1.525	0.202	1570863

BAC-2



Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	2.931	1647732
ETHANOL #2	1.663	1537736

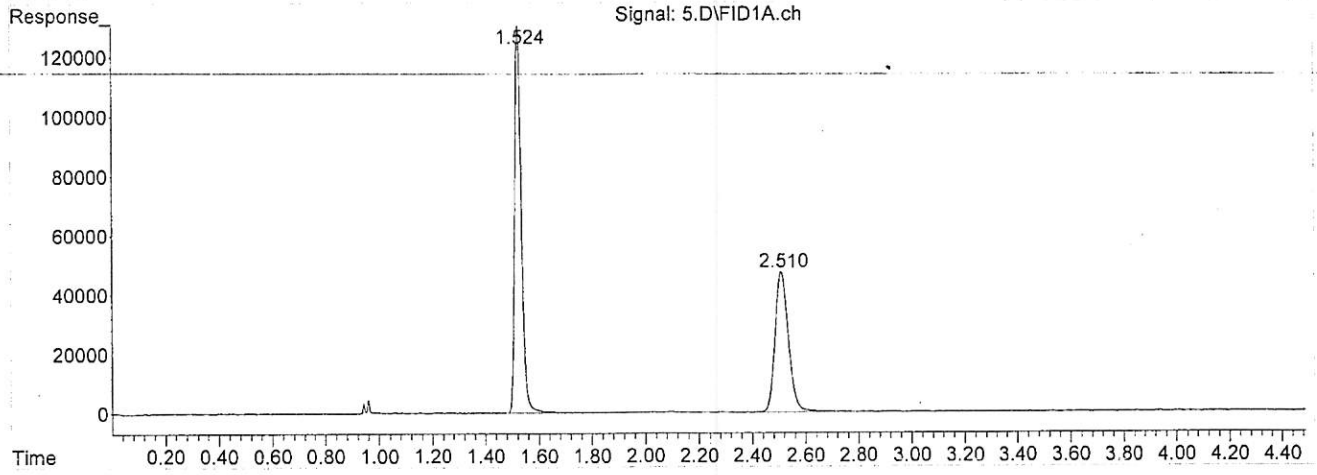
Printed on: Thu Jun 11 11:10:36 2015

RAW DATA

Harris County Institute of Forensic Sciences

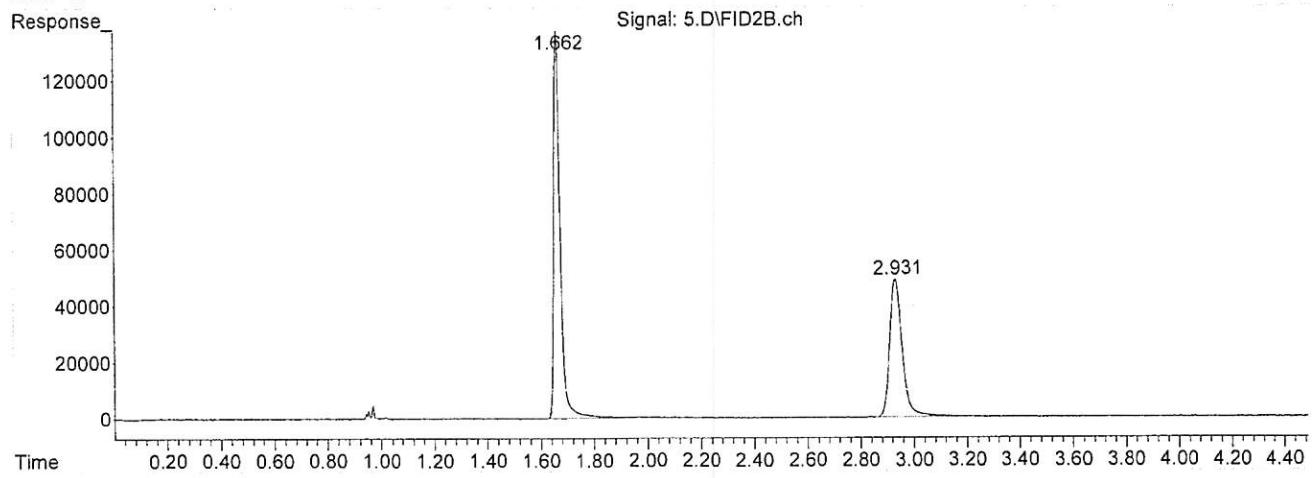
Sample Name	0.300 STD	Instrument Name	GC-2
Misc Info	RANGE (0.285-0.315)		
Tray/Vial	1/5	Operator	AAS
Date Acquired	6/11/2015 11:13	Acq. Method File	ALCOHOL.M
Data File Name	5.D	Last Calibrated	Thu Jun 11 11:18:39 2015
Data Path	C:\MSDCHEM\1\DATA\JUNE 2015\061115_ETOH CALIBRATION CURVE\5.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.510	0.020	1648271
ETHANOL	1.524	0.300	2295921

BAC-2

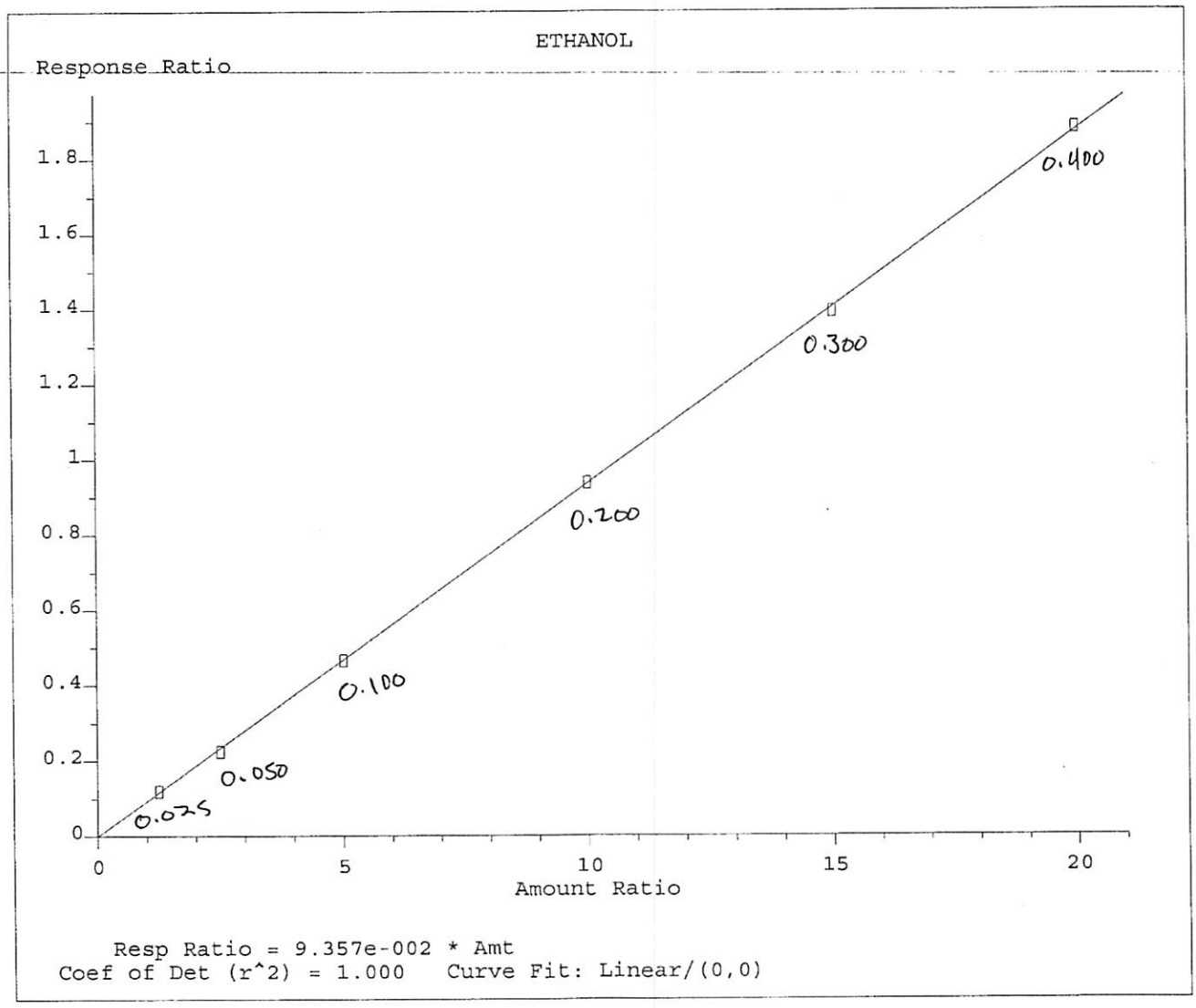


Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	2.931	1605096
ETHANOL #2	1.662	2284584

Printed on: Thu Jun 11 11:18:47 2015

Harris County Institute of Forensic Sciences
Forensic Alcohol Section
Calibration Report

Instrument: GC-2 Analyst : AAS
Data Path : C:\msdchem\1\data\JUNE 2015\061115_ETOH CALIBRATION CURVE
Seq Path : C:\msdchem\1\sequence\ETOH CALIBRATION CURVE_061115_AAS.S
Acquisition Method: C:\msdchem\1\methods\ALCOHOL.M
Calibration Date : 06/11/2015 11:26:53 AM



Resp Ratio = 9.357e-002 * Amt
Coef of Det (r^2) = 1.000 Curve Fit: Linear/(0,0)

Standard Name	Nominal g/dL	Ethanol Area	n-Propanol Area	Calculated g/dL	Flag
0.025 STD	0.025	193509	1628268	0.025	
0.050 STD	0.050	364390	1628186	0.048	
0.100 STD	0.100	763347	1638324	0.100	
0.200 STD	0.200	1570863	1675596	0.200	
0.300 STD	0.300	2295921	1648271	0.298	
0.400 STD	0.400	3066668	1631054	0.402	

Correlation Coefficient 0.99 or Better
Calibration may be used.

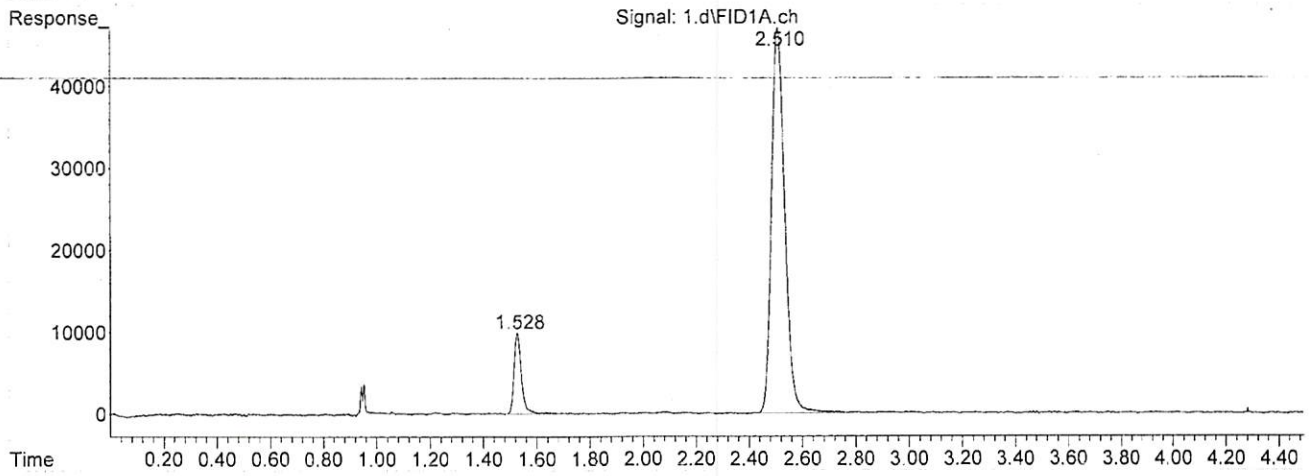
Printed on: Thu Jun 11 12:02:00 2015

Harris County Institute of Forensic Sciences

AZK

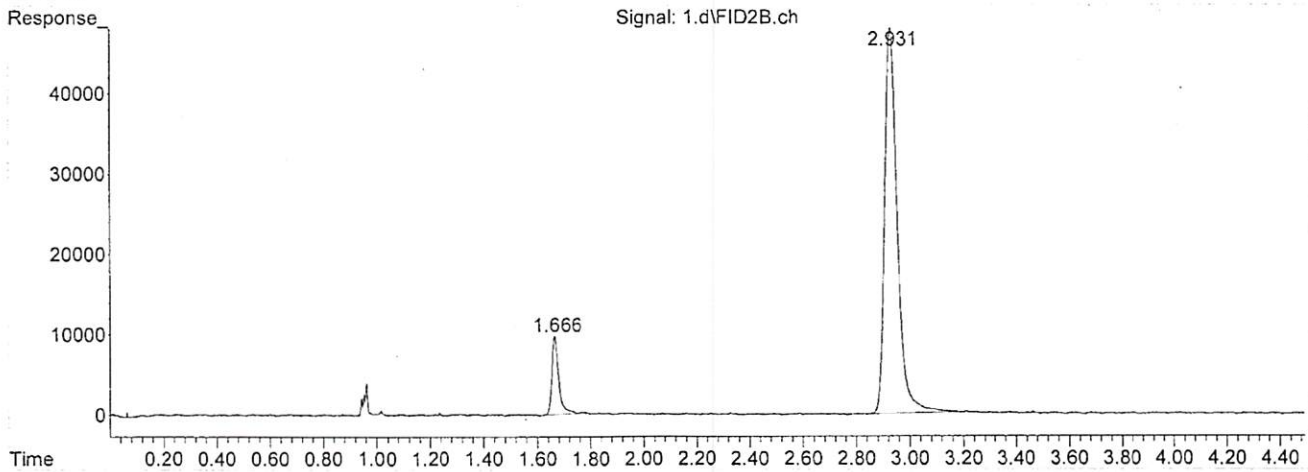
Sample Name	0.025 STD	Instrument Name	GC-2
Misc Info	RANGE (0.022-0.027)		
Tray/Vial	1/1	Operator	AAS
Date Acquired	6/11/2015 10:40	Acq. Method File	ALCOHOL.M
Data File Name	1.D	Last Calibrated	Thu Jun 11 11:26:53 2015
Data Path	C:\msdchem\1\data\JUNE 2015\061115_ETOH CALIBRATION CURVE\1.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.510	0.020	1628268
ETHANOL	1.528	0.025	193509

BAC-2



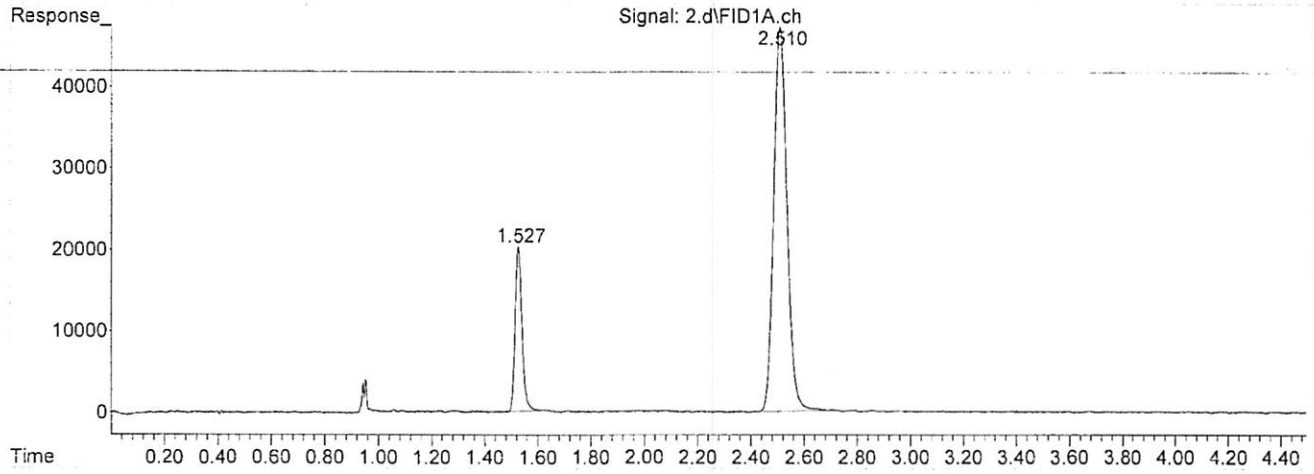
Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	2.931	1586433
ETHANOL #2	1.666	171569

Printed on: Thu Jun 11 12:02:22 2015

Harris County Institute of Forensic Sciences

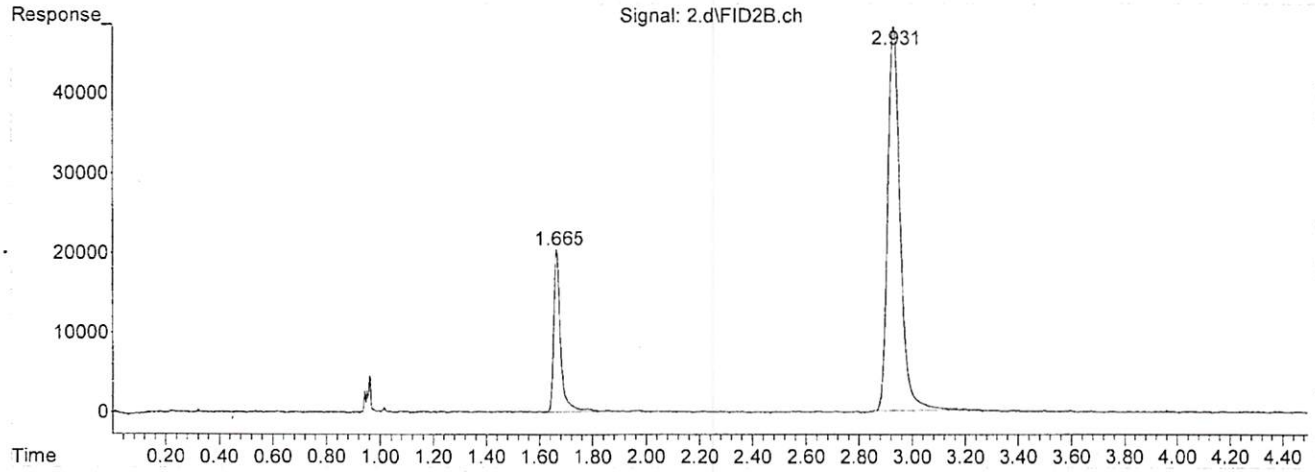
Sample Name	0.050 STD	Instrument Name	GC-2
Misc Info	RANGE (0.047-0.052)		
Tray/Vial	1/2	Operator	AAS
Date Acquired	6/11/2015 10:48	Acq. Method File	ALCOHOL.M
Data File Name	2.D	Last Calibrated	Thu Jun 11 11:26:53 2015
Data Path	C:\msdchem\1\data\JUNE 2015\061115_ETOH CALIBRATION CURVE\2.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.510	0.020	1628186
ETHANOL	1.527	0.047	364390

BAC-2



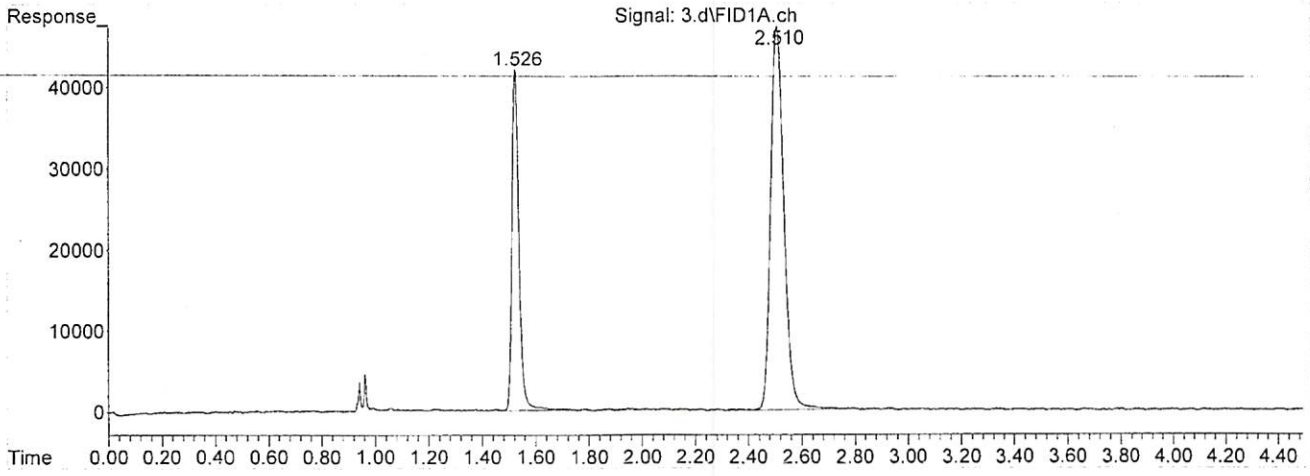
Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	2.931	1583783
ETHANOL #2	1.665	369377

Printed on: Thu Jun 11 12:02:24 2015

Harris County Institute of Forensic Sciences

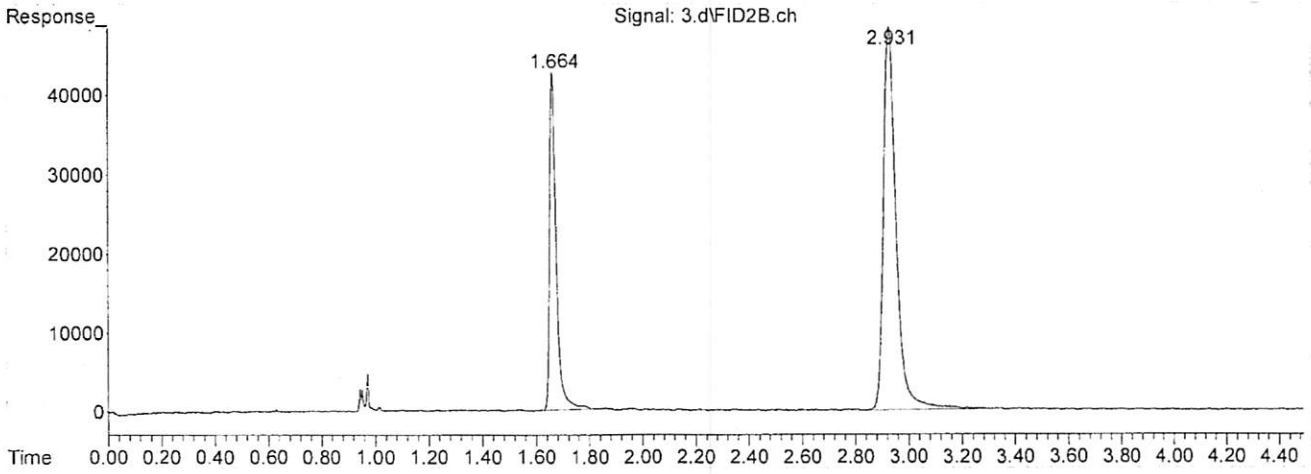
Sample Name	0.100 STD	Instrument Name	GC-2
Misc Info	RANGE (0.095-0.105)		
Tray/Vial	1/3	Operator	AAS
Date Acquired	6/11/2015 10:57	Acq. Method File	ALCOHOL.M
Data File Name	3.D	Last Calibrated	Thu Jun 11 11:26:53 2015
Data Path	C:\msdchem\1\data\JUNE 2015\061115_ETOH CALIBRATION CURVE\3.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.510	0.020	1638324
ETHANOL	1.526	0.099	763347

BAC-2



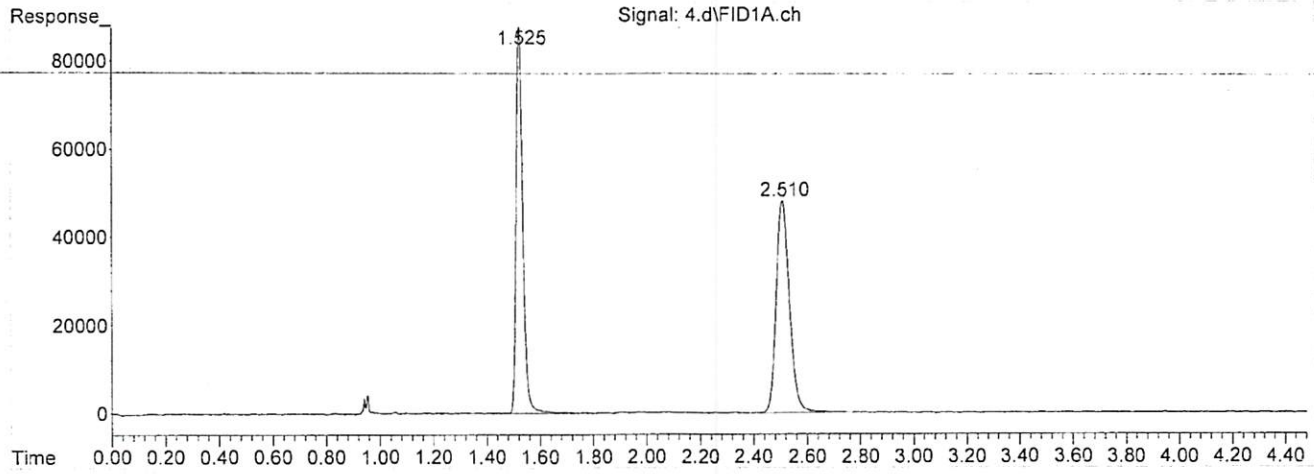
Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	2.931	1624568
ETHANOL #2	1.664	733242

Printed on: Thu Jun 11 12:02:26 2015

Harris County Institute of Forensic Sciences

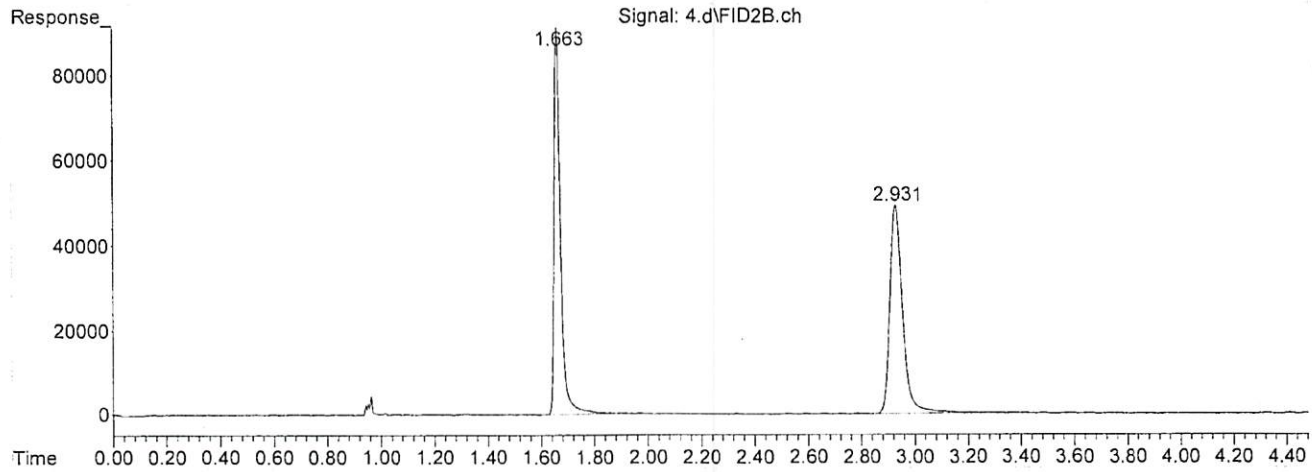
Sample Name	0.200 STD	Instrument Name	GC-2
Misc Info	RANGE (0.190-0.210)		
Tray/Vial	1/4	Operator	AAS
Date Acquired	6/11/2015 11:05	Acq. Method File	ALCOHOL.M
Data File Name	4.D	Last Calibrated	Thu Jun 11 11:26:53 2015
Data Path	C:\msdchem\1\data\JUNE 2015\061115_ETOH CALIBRATION CURVE\4.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.510	0.020	1675596
ETHANOL	1.525	0.200	1570863

BAC-2



Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	2.931	1647732
ETHANOL #2	1.663	1537736

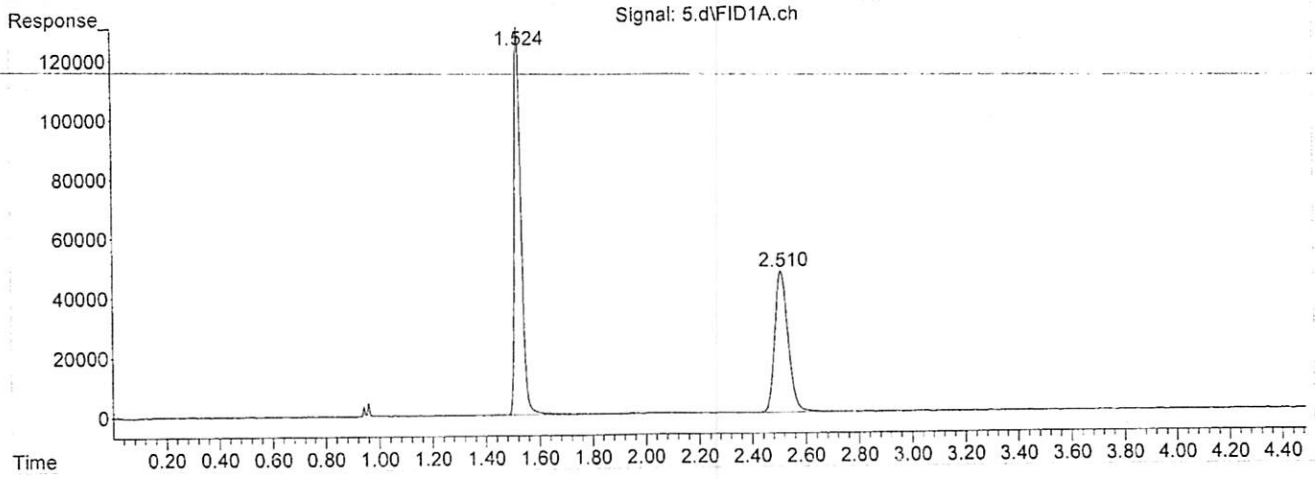
Printed on: Thu Jun 11 12:02:28 2015

Harris County Institute of Forensic Sciences

ACK

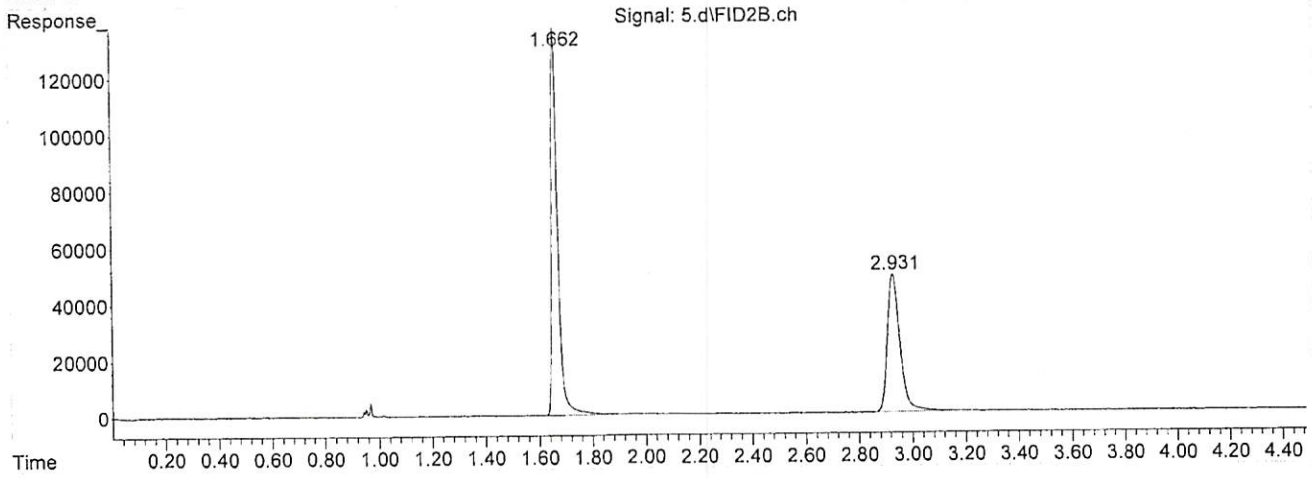
Sample Name	0.300 STD	Instrument Name	GC-2
Misc Info	RANGE (0.285-0.315)		
Tray/Vial	1/5	Operator	AAS
Date Acquired	6/11/2015 11:13	Acq. Method File	ALCOHOL.M
Data File Name	5.D	Last Calibrated	Thu Jun 11 11:26:53 2015
Data Path	C:\msdchem\1\data\JUNE 2015\061115_ETOH CALIBRATION CURVE\5.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.510	0.020	1648271
ETHANOL	1.524	0.297	2295921

BAC-2



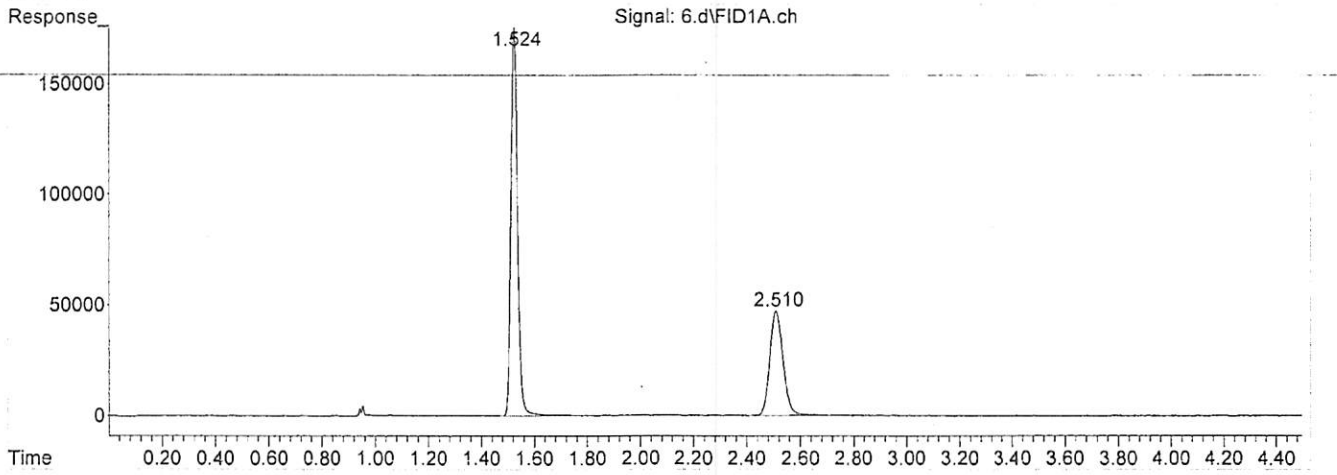
Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	2.931	1605096
ETHANOL #2	1.662	2284584

Printed on: Thu Jun 11 12:02:30 2015

Harris County Institute of Forensic Sciences

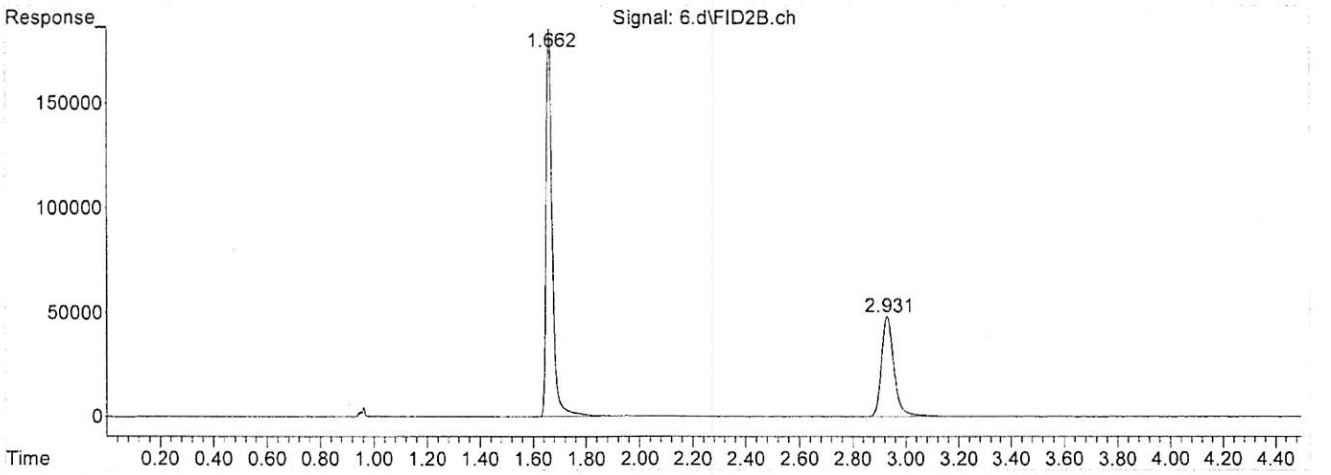
Sample Name	0.400 STD	Instrument Name	GC-2
Misc Info	RANGE (0.380-0.420)		
Tray/Vial	1/6	Operator	AAS
Date Acquired	6/11/2015 11:21	Acq. Method File	ALCOHOL.M
Data File Name	6.D	Last Calibrated	Thu Jun 11 11:26:53 2015
Data Path	C:\MSDCHEM\1\DATA\JUNE 2015\061115_ETOH CALIBRATION CURVE\6.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.510	0.020	1631054
ETHANOL	1.524	0.401	3066668

BAC-2



Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	2.931	1590029
ETHANOL #2	1.662	3052151

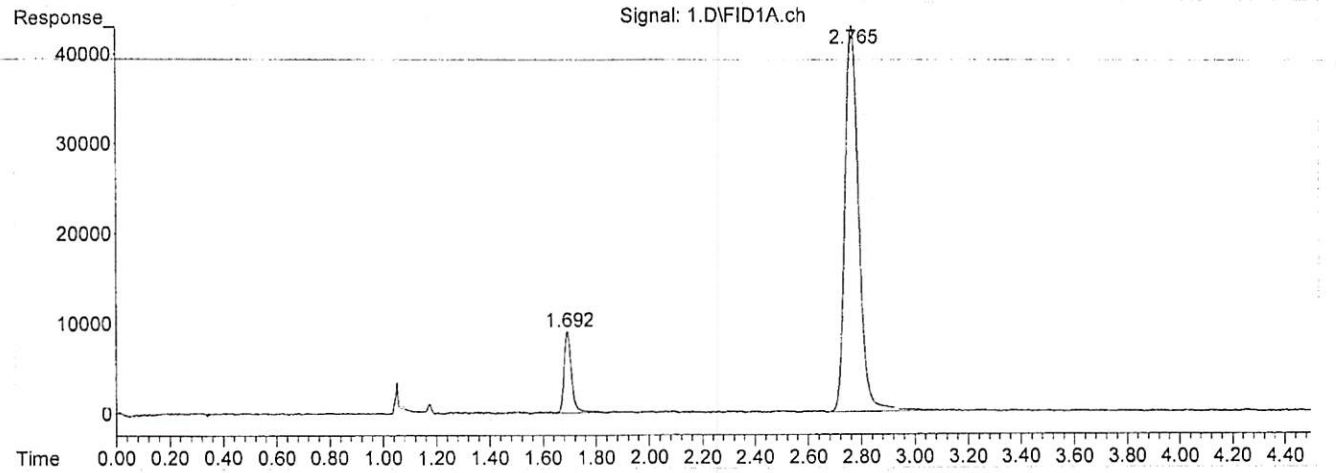
Printed on: Thu Jun 11 11:27:53 2015

KP

Harris County Institute of Forensic Sciences

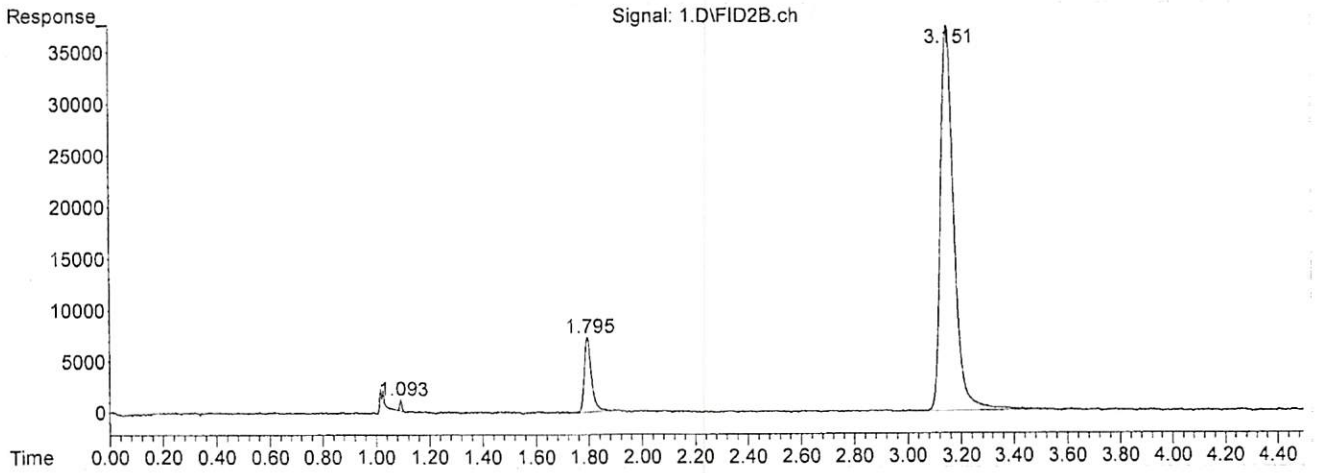
Sample Name	0.025 STD	Instrument Name	GC-1
Misc Info	RANGE (0.022-0.027)		
Tray/Vial	1/1	Operator	KP
Date Acquired	6/22/2015 8:01	Acq. Method File	ALCOHOL.M
Data File Name	1.D	Last Calibrated	Mon Jun 22 08:06:55 2015
Data Path	C:\MSDCHEM\1\DATA\JUNE 2015\062215_ETOH CALIBRATION CURVE\1.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.765	0.020	1542908
ETHANOL	1.692	0.024	178016

BAC-2



Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	3.151	1310860
ETHANOL #2	1.795	138229

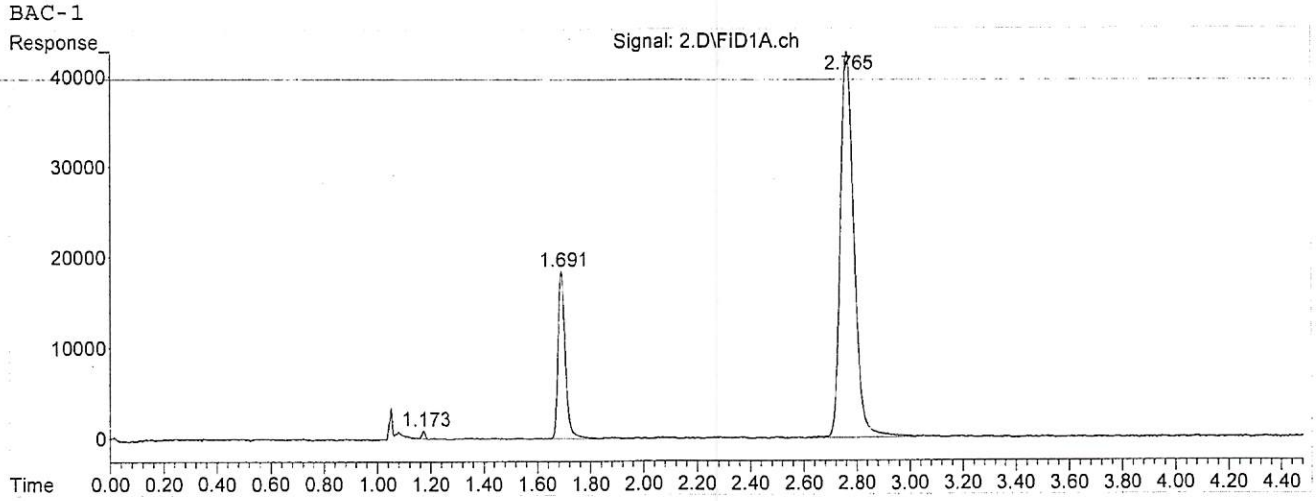
Printed on: Mon Jun 22 08:07:03 2015

KP

Harris County Institute of Forensic Sciences

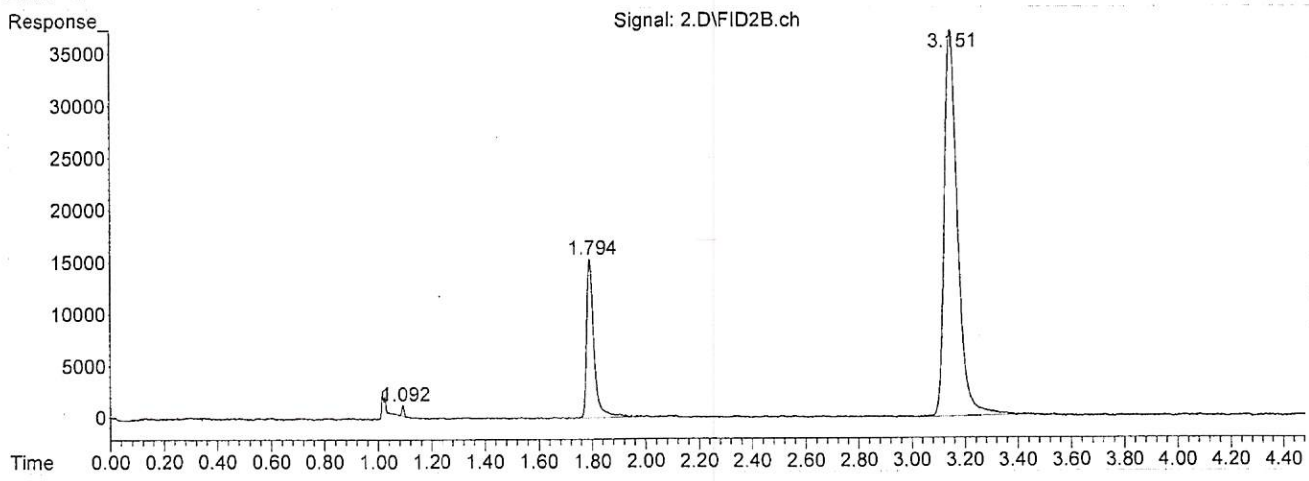
Sample Name	0.050 STD	Instrument Name	GC-1
Misc Info	RANGE (0.047-0.052)		
Tray/Vial	1/2	Operator	KP
Date Acquired	6/22/2015 8:09	Acq. Method File	ALCOHOL.M
Data File Name	2.D	Last Calibrated	Mon Jun 22 08:14:52 2015
Data Path	C:\MSDCHEM\1\DATA\JUNE 2015\062215_ETOH CALIBRATION CURVE\2.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.765	0.020	1526072
ETHANOL	1.691	0.049	349862

BAC-2



Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	3.151	1292527
ETHANOL #2	1.794	295042

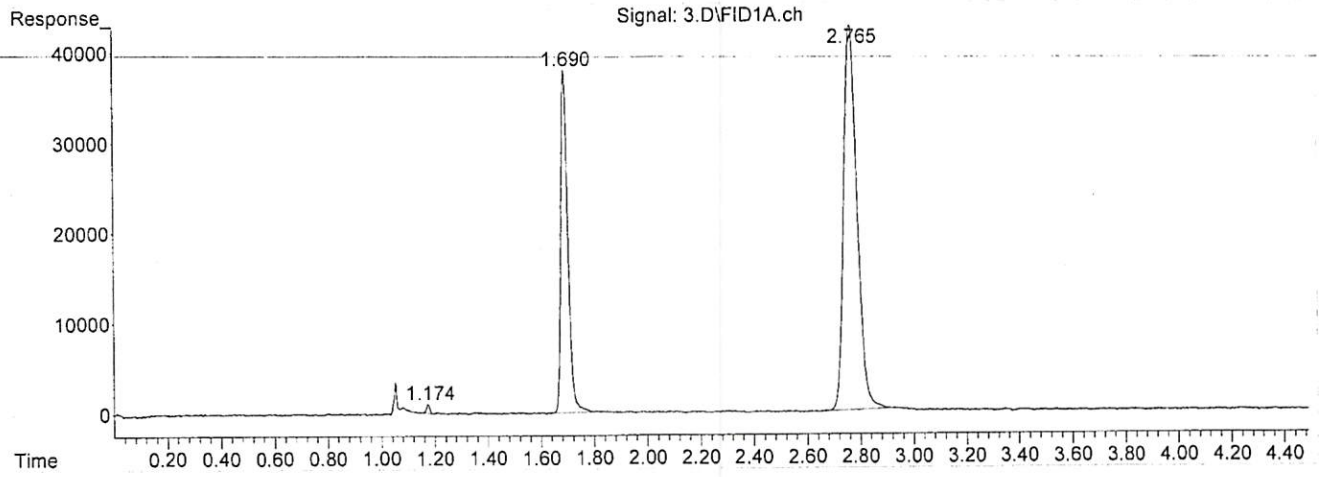
Printed on: Mon Jun 22 08:15:00 2015

KP

Harris County Institute of Forensic Sciences

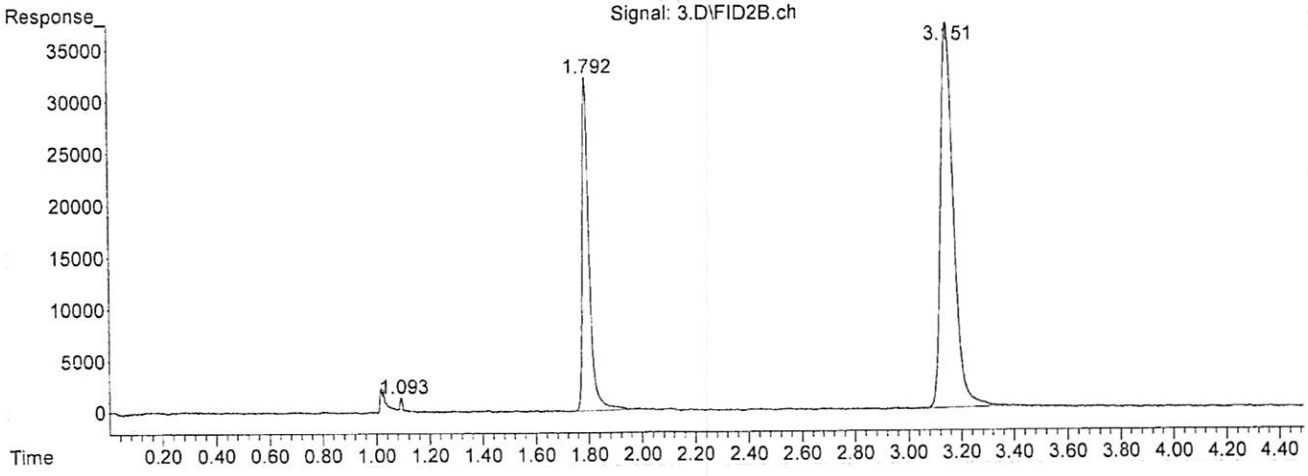
Sample Name	0.100 STD	Instrument Name	GC-1
Misc Info	RANGE (0.095-0.105)		
Tray/Vial	1/3	Operator	KP
Date Acquired	6/22/2015 8:17	Acq. Method File	ALCOHOL.M
Data File Name	3.D	Last Calibrated	Mon Jun 22 08:22:50 2015
Data Path	C:\MSDCHEM\1\DATA\JUNE 2015\062215_ETOH CALIBRATION CURVE\3.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.765	0.020	1490586
ETHANOL	1.690	0.099	690948

BAC-2



Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	3.151	1277446
ETHANOL #2	1.792	585580

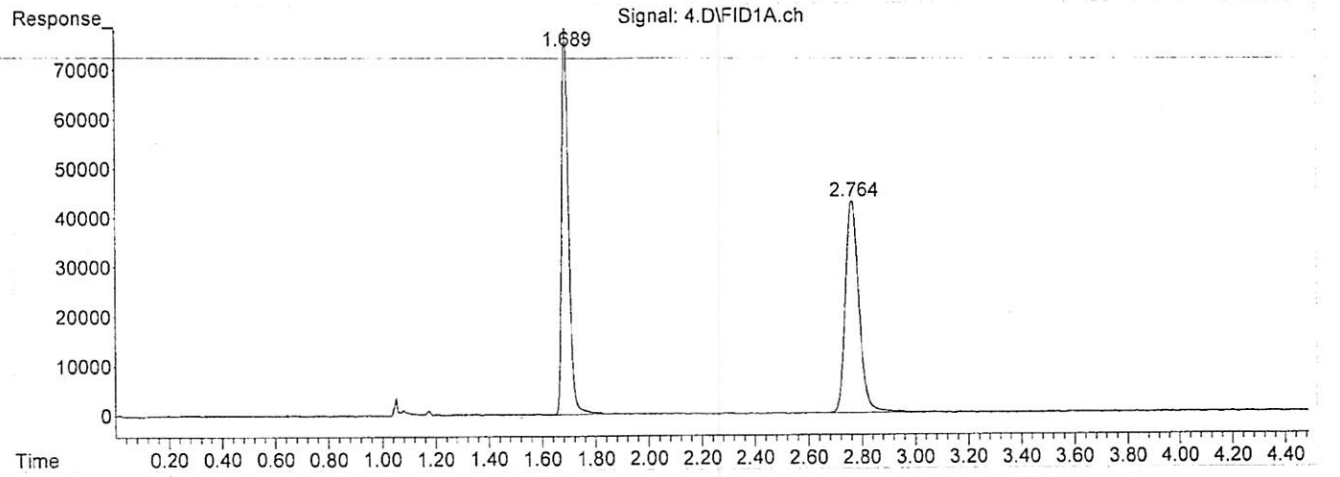
Printed on: Mon Jun 22 08:22:58 2015

KP

Harris County Institute of Forensic Sciences

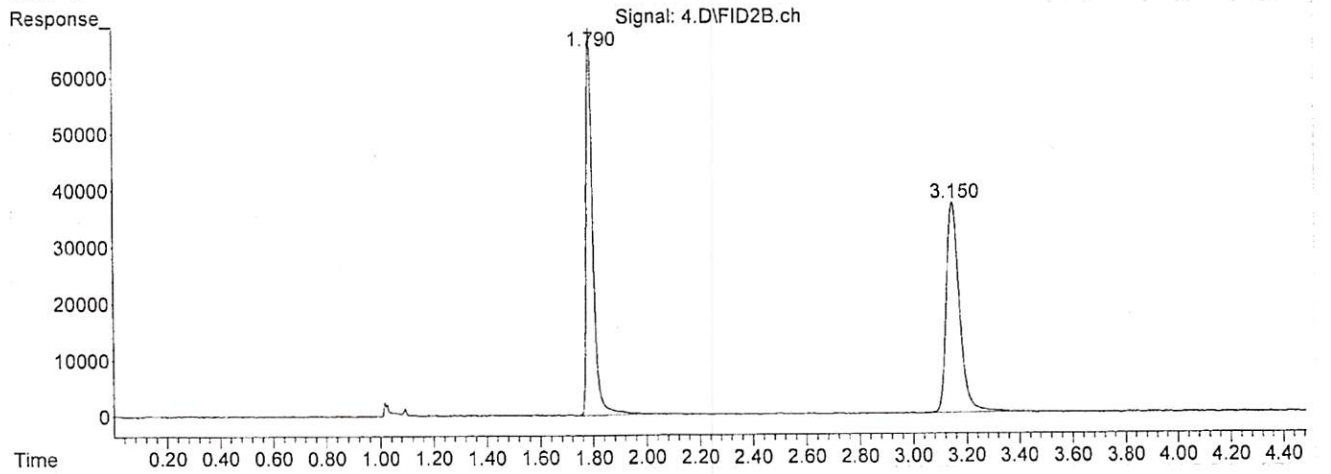
Sample Name	0.200 STD	Instrument Name	GC-1
Misc Info	RANGE (0.190-0.210)		
Tray/Vial	1/4	Operator	KP
Date Acquired	6/22/2015 8:25	Acq. Method File	ALCOHOL.M
Data File Name	4.D	Last Calibrated	Mon Jun 22 08:30:47 2015
Data Path	C:\MSDCHEM\1\DATA\JUNE 2015\062215_ETOH CALIBRATION CURVE\4.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.764	0.020	1529326
ETHANOL	1.689	0.199	1416962

BAC-2



Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	3.150	1289288
ETHANOL #2	1.790	1211770

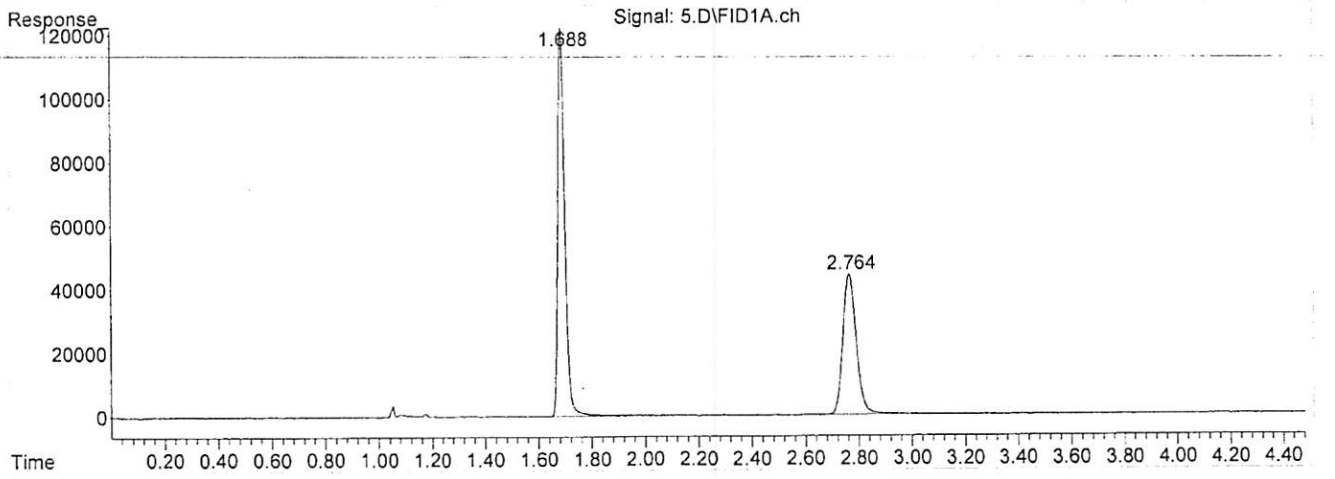
Printed on: Mon Jun 22 08:30:55 2015

KP

Harris County Institute of Forensic Sciences

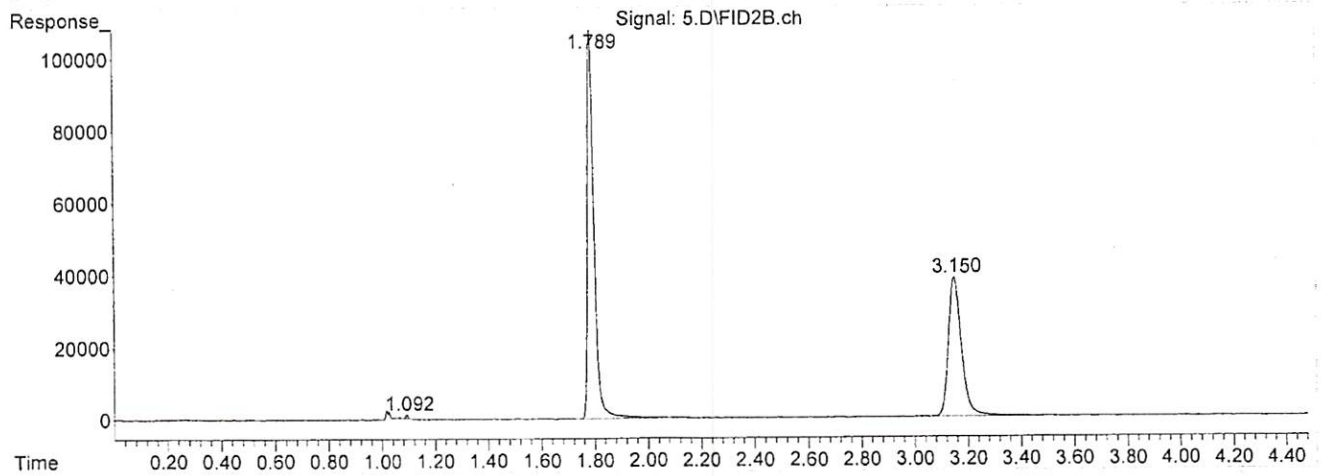
Sample Name	0.300 STD	Instrument Name	GC-1
Misc Info	RANGE (0.285-0.315)		
Tray/Vial	1/5	Operator	KP
Date Acquired	6/22/2015 8:33	Acq. Method File	ALCOHOL.M
Data File Name	5.D	Last Calibrated	Mon Jun 22 08:38:46 2015
Data Path	C:\MSDCHEM\1\DATA\JUNE 2015\062215_ETOH CALIBRATION CURVE\5.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.764	0.020	1553733
ETHANOL	1.688	0.302	2185880

BAC-2



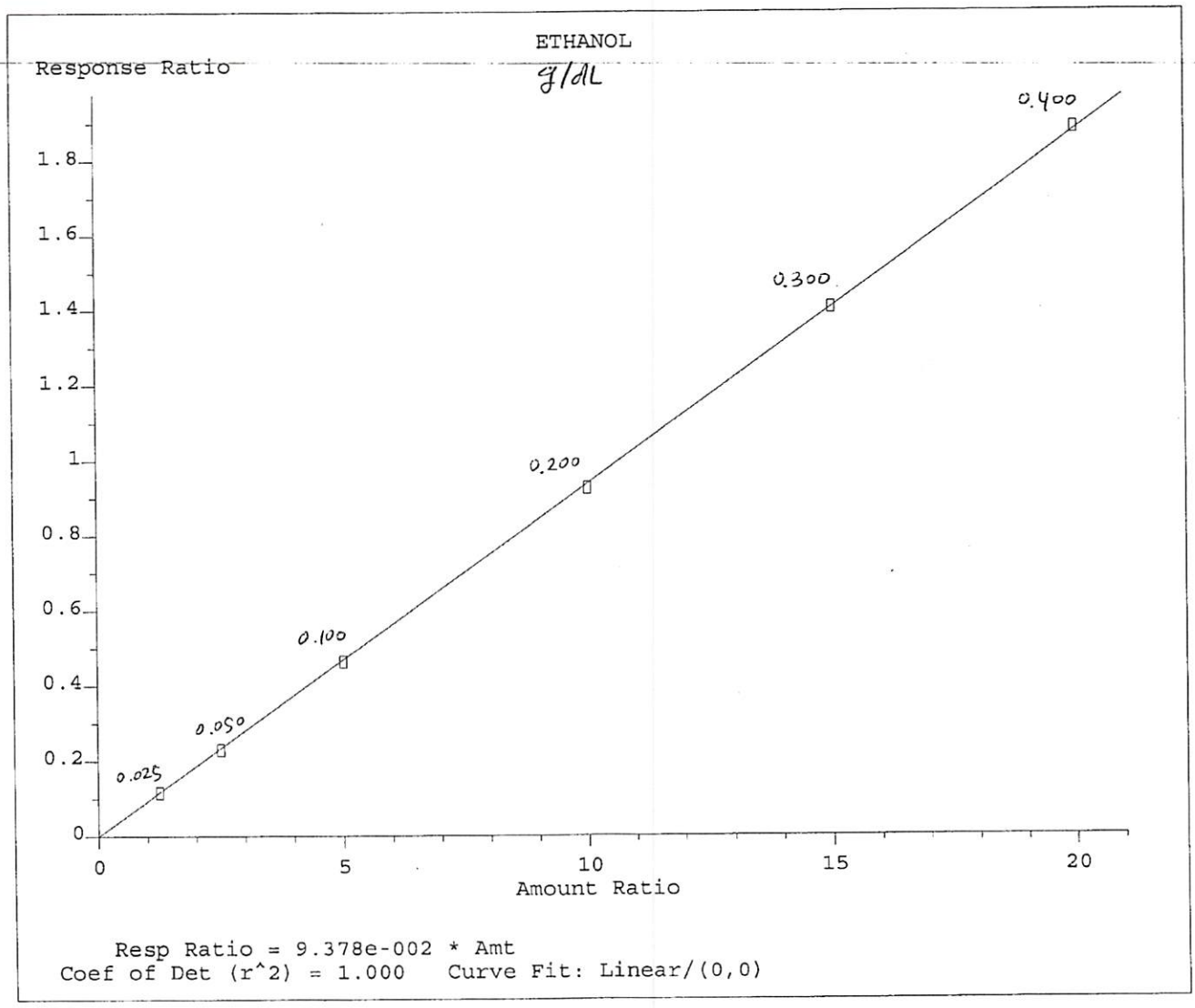
Name	Ret Time	Target Response (Area)
METHANOL #2	0.000	0
ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	3.150	1333704
ETHANOL #2	1.789	1860577

Printed on: Mon Jun 22 08:38:54 2015

KP

Harris County Institute of Forensic Sciences
Forensic Alcohol Section
Calibration Report

Instrument: GC-1 Analyst : KP
Data Path : C:\msdchem\1\DATA\JUNE 2015\062215_ETOH CALIBRATION CURVE
Seq Path : C:\msdchem\1\sequence\ETOH CALIBRATION CURVE_062215_KP.S
Acquisition Method: C:\msdchem\1\METHODS\ALCOHOL.M
Calibration Date : 06/22/2015 08:46:46 AM



Resp Ratio = 9.378e-002 * Amt
Coef of Det (r^2) = 1.000 Curve Fit: Linear/(0,0)

Standard Name	Nominal g/dL	Ethanol Area	n-Propanol Area	Calculated g/dL	Flag
0.025 STD	0.025	178016	1542908	0.025	
0.050 STD	0.050	349862	1526072	0.049	
0.100 STD	0.100	690948	1490586	0.099	
0.200 STD	0.200	1416962	1529326	0.198	
0.300 STD	0.300	2185880	1553733	0.300	
0.400 STD	0.400	2908629	1544448	0.402	

Correlation Coefficient 0.99 or Better
Calibration may be used.

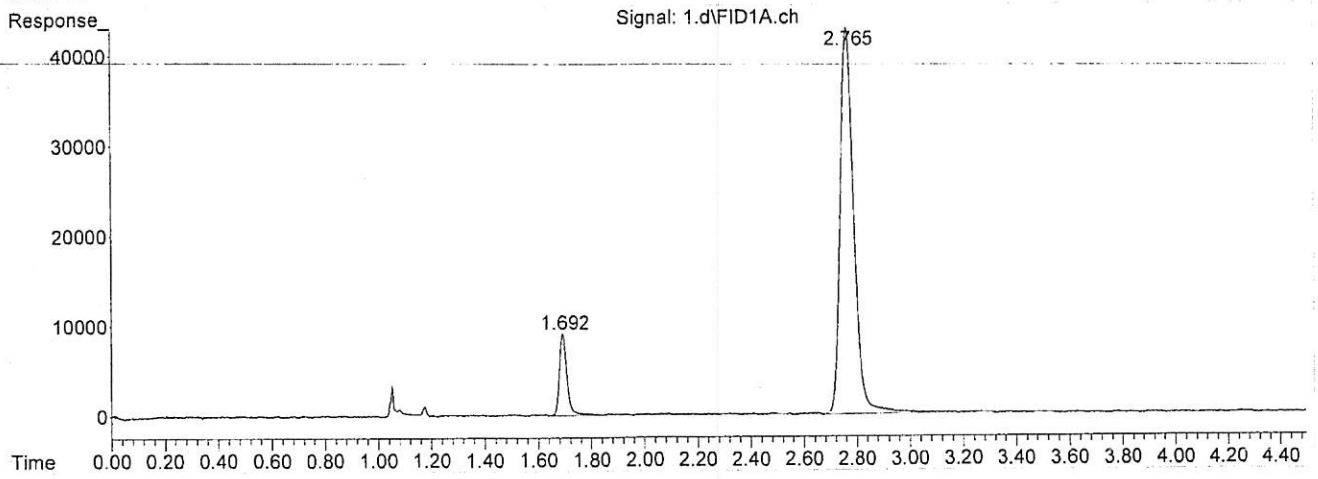
Printed on: Mon Jun 22 09:07:44 2015

KP

Harris County Institute of Forensic Sciences

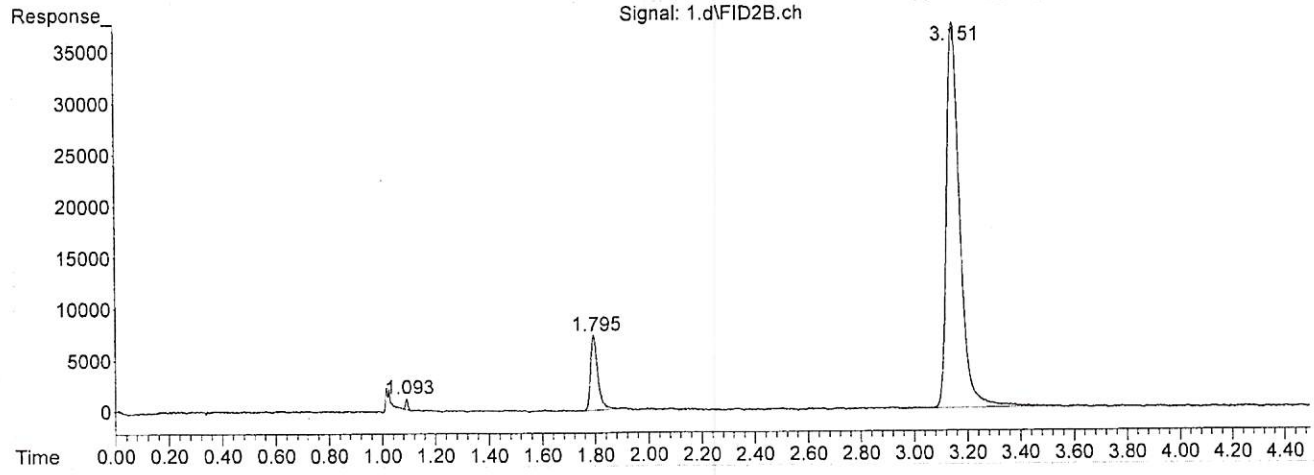
Sample Name	0.025 STD	Instrument Name	GC-1
Misc Info	RANGE (0.022-0.027)		
Tray/Vial	1/1	Operator	KP
Date Acquired	6/22/2015 8:01	Acq. Method File	ALCOHOL.M
Data File Name	1.D	Last Calibrated	Mon Jun 22 08:46:46 2015
Data Path	C:\msdchem\1\DATA\JUNE 2015\062215_ETOH CALIBRATION CURVE\1.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.765	0.020	1542908
ETHANOL	1.692	0.024	178016

BAC-2



Name	Ret Time	Target Response (Area)
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ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	3.151	1310860
ETHANOL #2	1.795	138229

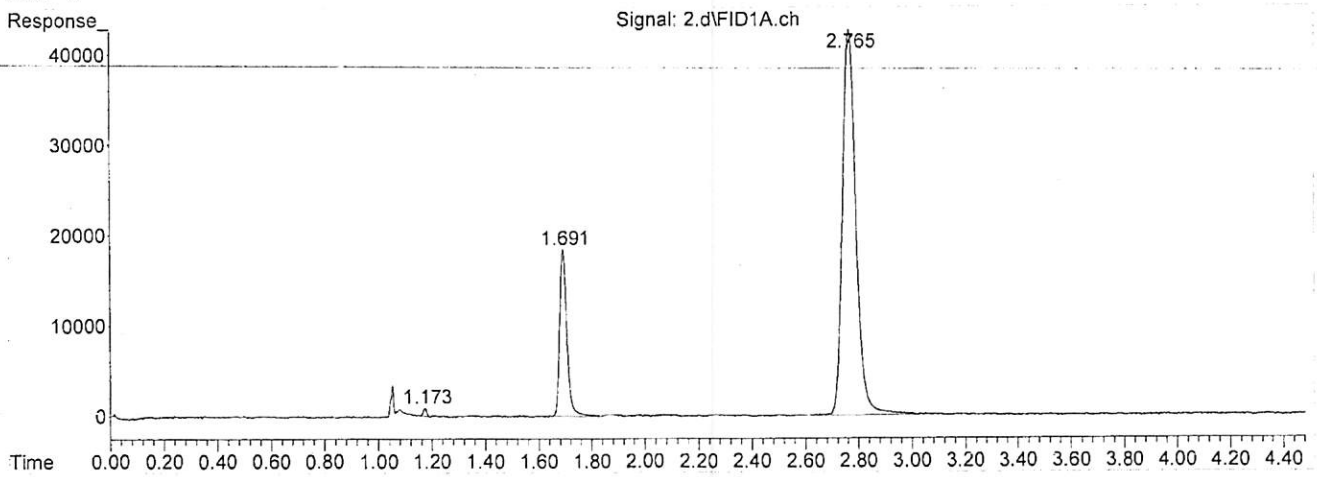
Printed on: Mon Jun 22 09:07:54 2015

KP

Harris County Institute of Forensic Sciences

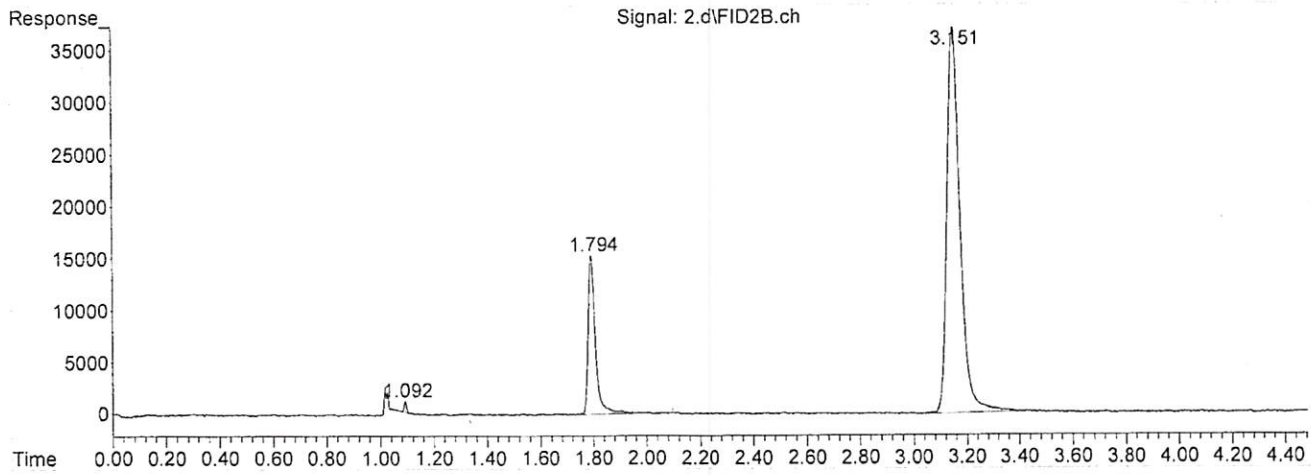
Sample Name	0.050 STD	Instrument Name	GC-1
Misc Info	RANGE (0.047-0.052)		
Tray/Vial	1/2	Operator	KP
Date Acquired	6/22/2015 8:09	Acq. Method File	ALCOHOL.M
Data File Name	2.D	Last Calibrated	Mon Jun 22 08:46:46 2015
Data Path	C:\msdchem\1\DATA\JUNE 2015\062215_ETOH CALIBRATION CURVE\2.D		

BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.765	0.020	1526072
ETHANOL	1.691	0.048	349862

BAC-2



Name	Ret Time	Target Response (Area)
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ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	3.151	1292527
ETHANOL #2	1.794	295042

Printed on: Mon Jun 22 09:07:56 2015

KP

Harris County Institute of Forensic Sciences

Sample Name	0.100 STD	Instrument Name	GC-1
Misc Info	RANGE (0.095-0.105)		
Tray/Vial	1/3	Operator	KP
Date Acquired	6/22/2015 8:17	Acq. Method File	ALCOHOL.M
Data File Name	3.D	Last Calibrated	Mon Jun 22 08:46:46 2015
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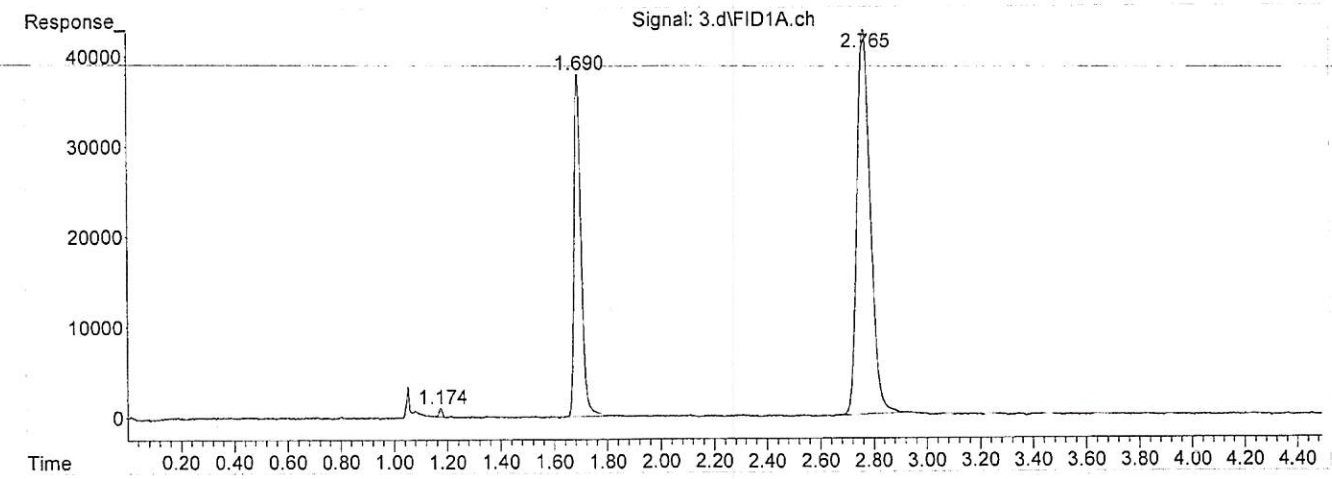
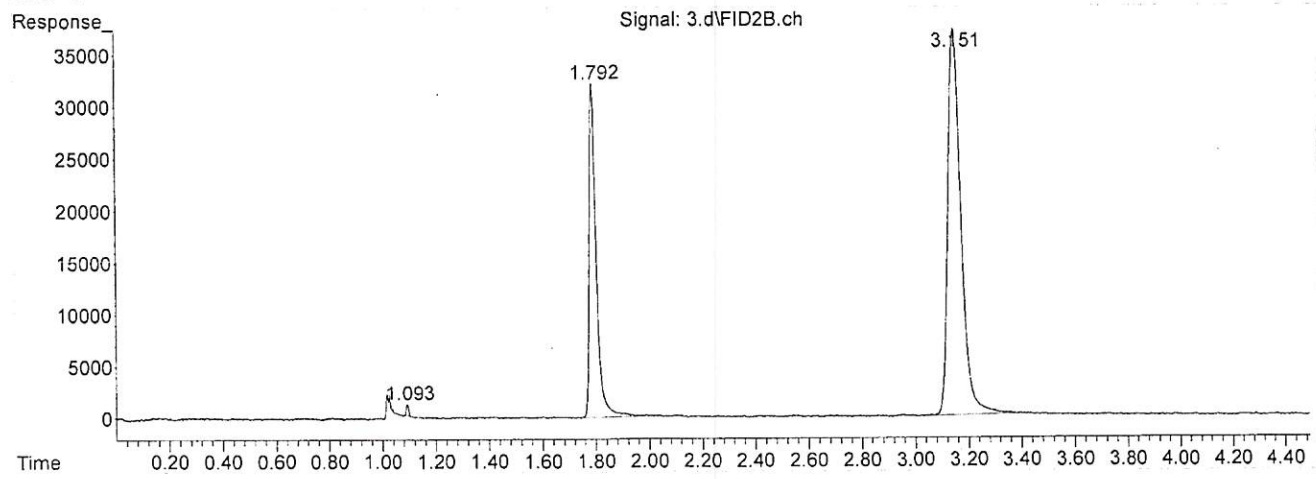
BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.765	0.020	1490586
ETHANOL	1.690	0.098	690948

BAC-2



Name	Ret Time	Target Response (Area)
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ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	3.151	1277446
ETHANOL #2	1.792	585580

Printed on: Mon Jun 22 09:07:58 2015

KP

Harris County Institute of Forensic Sciences

Sample Name	0.200 STD	Instrument Name	GC-1
Misc Info	RANGE (0.190-0.210)		
Tray/Vial	1/4	Operator	KP
Date Acquired	6/22/2015 8:25	Acq. Method File	ALCOHOL.M
Data File Name	4.D	Last Calibrated	Mon Jun 22 08:46:46 2015
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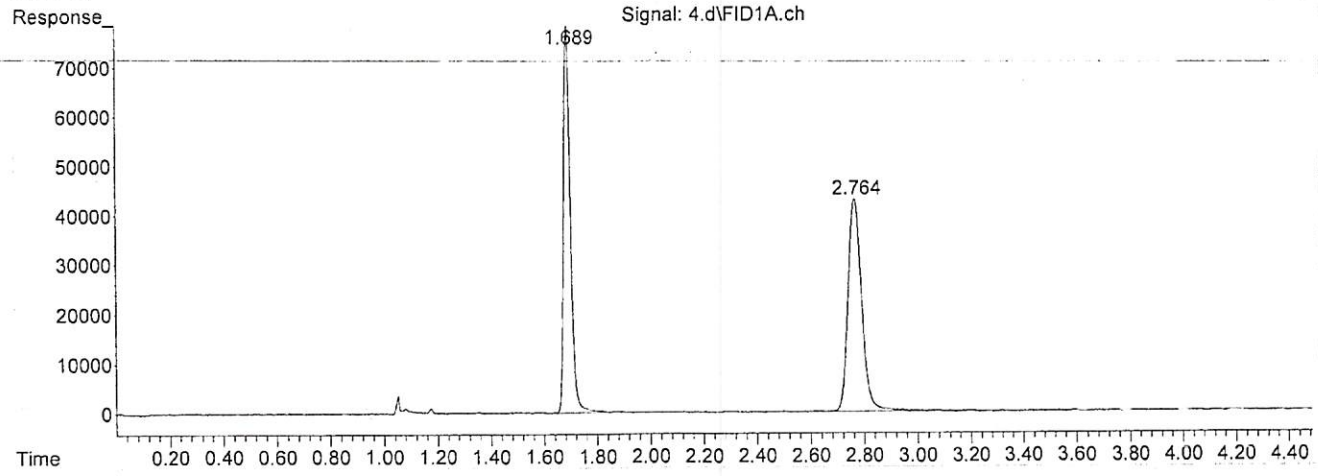
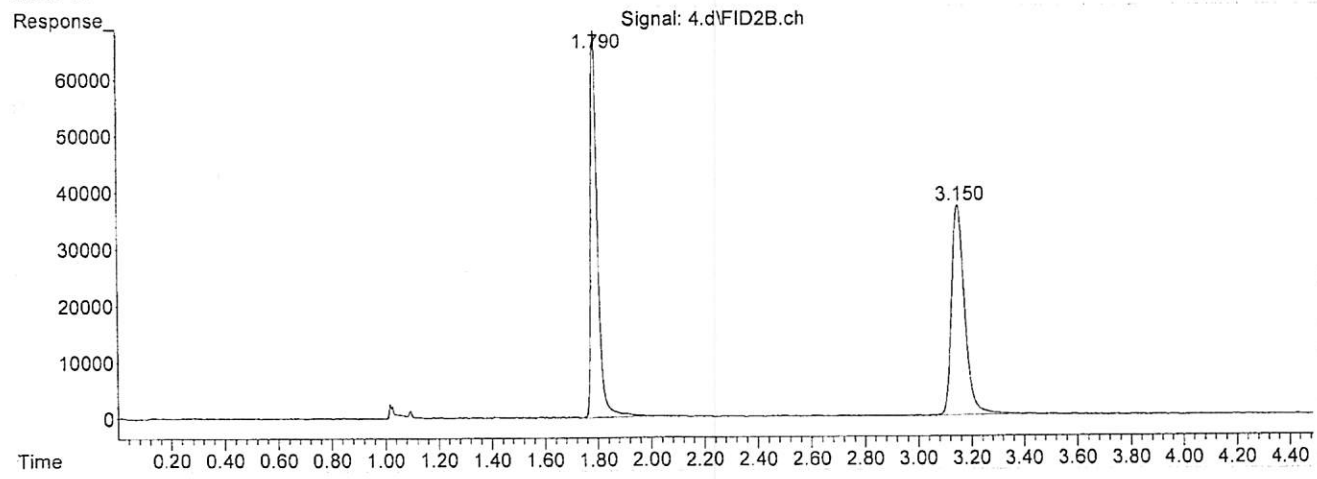
BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.764	0.020	1529326
ETHANOL	1.689	0.197	1416962

BAC-2



Name	Ret Time	Target Response (Area)
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ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	3.150	1289288
ETHANOL #2	1.790	1211770

Printed on: Mon Jun 22 09:08:00 2015

KP

Harris County Institute of Forensic Sciences

Sample Name	0.300 STD	Instrument Name	GC-1
Misc Info	RANGE (0.285-0.315)		
Tray/Vial	1/5	Operator	KP
Date Acquired	6/22/2015 8:33	Acq. Method File	ALCOHOL.M
Data File Name	5.D	Last Calibrated	Mon Jun 22 08:46:46 2015
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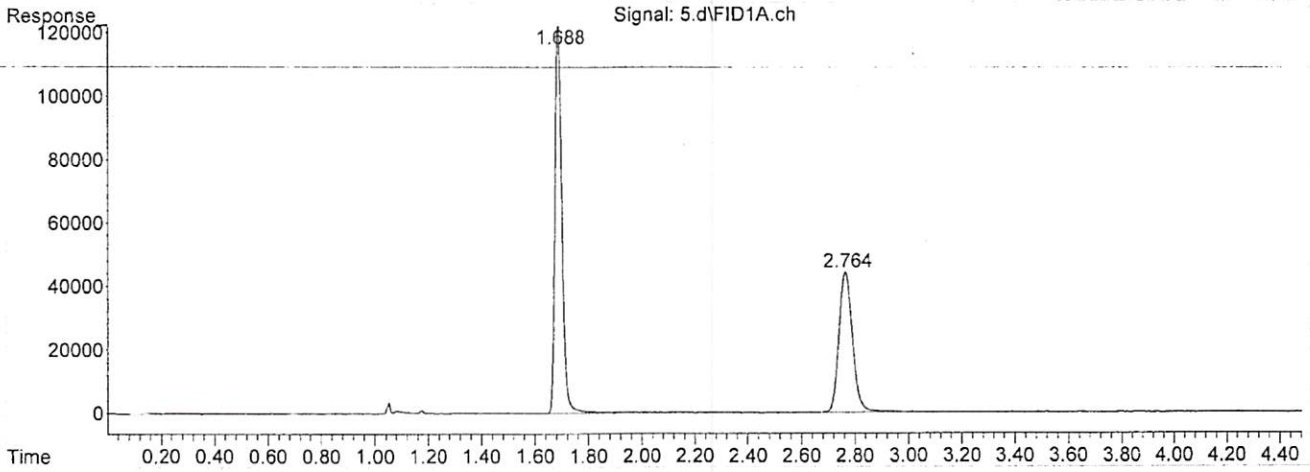
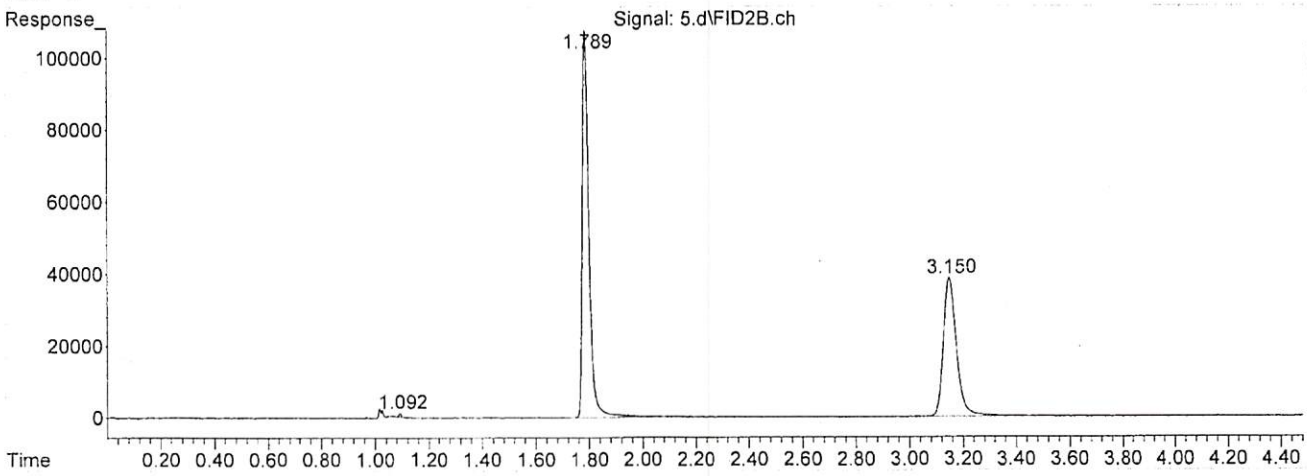
BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.764	0.020	1553733
ETHANOL	1.688	0.300	2185880

BAC-2



Name	Ret Time	Target Response (Area)
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ACETONE #2	0.000	0
i-PROPANOL #2	0.000	0
n-PROPANOL #2	3.150	1333704
ETHANOL #2	1.789	1860577

Printed on: Mon Jun 22 09:08:02 2015

7p

Harris County Institute of Forensic Sciences

Sample Name	0.400 STD	Instrument Name	GC-1
Misc Info	RANGE (0.380-0.420)		
Tray/Vial	1/6	Operator	KP
Date Acquired	6/22/2015 8:41	Acq. Method File	ALCOHOL.M
Data File Name	6.D	Last Calibrated	Mon Jun 22 08:46:46 2015
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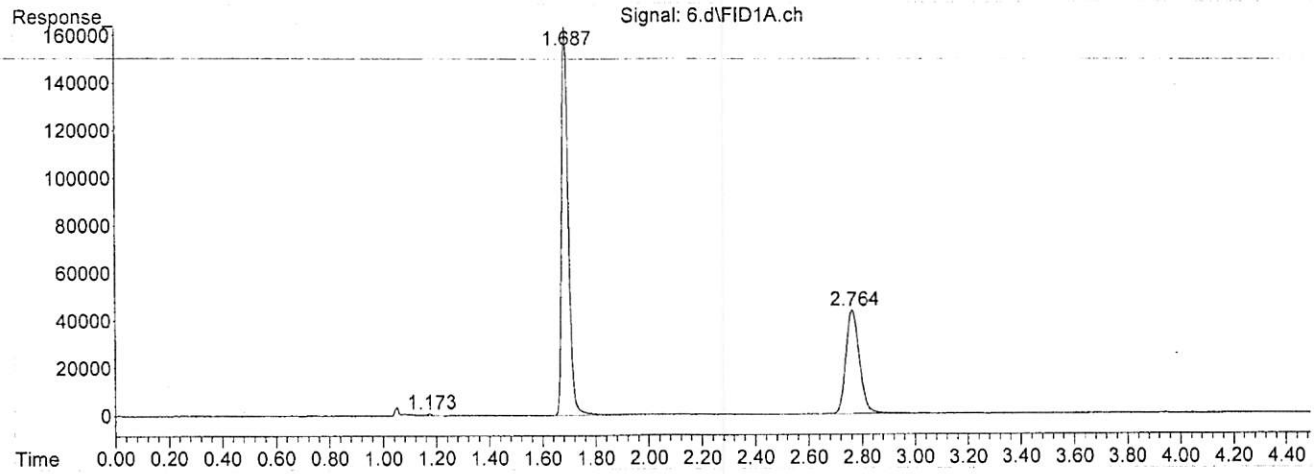
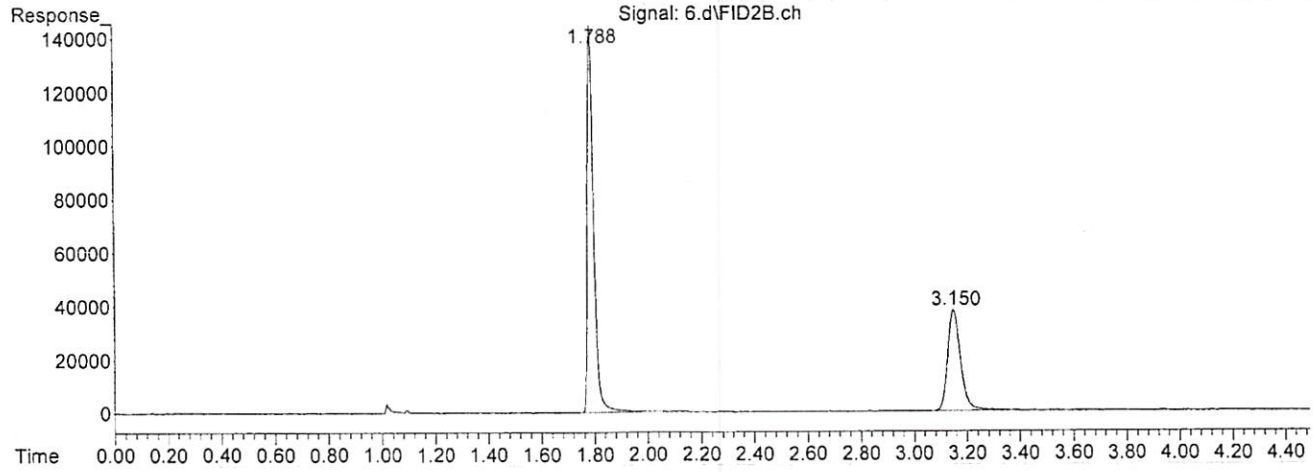
BAC-1



Name	Ret Time	Amount (g/dL)	Target Response (Area)
METHANOL	0.000	0.000	0
ACETONE	0.000	0.000	0
i-PROPANOL	0.000	0.000	0
n-PROPANOL	2.764	0.020	1544448
ETHANOL	1.687	0.401	2908629

BAC-2



Name	Ret Time	Target Response (Area)
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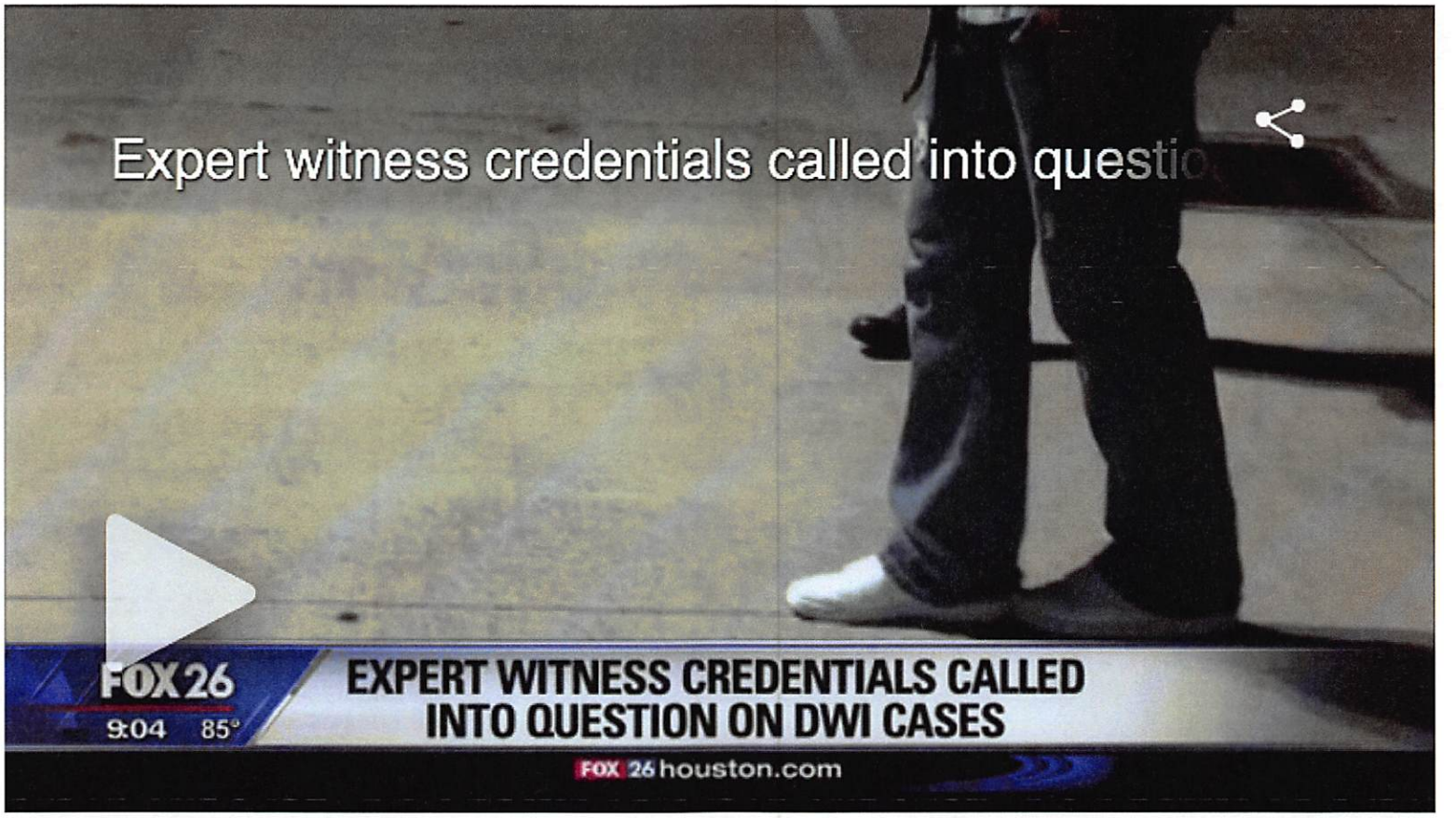
i-PROPANOL #2	0.000	0
n-PROPANOL #2	3.150	1296953
ETHANOL #2	1.788	2450002

Printed on: Mon Jun 22 08:47:47 2015

EXHIBIT #6

Expert witness credentials called into question on DWI cases



Expert witness credentials called into question on DWI cases

By: Angela Chen (mailto:angela.chen@foxtv.com?body=http://www.fox26houston.com/news/20334609-story)

POSTED:SEP 07 2016 09:28PM CDT
UPDATED:SEP 07 2016 09:48PM CDT

HOUSTON - The Harris County District Attorney's office is re-evaluating a decade's worth of DWI cases.

This comes after the credentials of an expert witness, a toxicology analyst, were called into question.

The analyst has been identified as Dr. Fessessework Guale, who works with the Harris County Institute of Forensic Sciences.

The issue of concern is her educational background. Court testimony shows that as an expert witness on DWI cases, she has said, under oath, that she has a Master's in Toxicology.

However, a notice sent out by the Harris County District Attorney's office says she, "in fact, received her Master's in Physiological Sciences." But an attorney who said he has cross examined her before and has her resume, showed Fox 26 News that her Master's is actually in physiological sciences for animals and that she has a vet degree from Ethiopia.

"All of her formal education has been toward animals, not the human body. This is very disturbing," said Tyler Flood, the president of the Harris County Criminal Lawyers Association.

A statement from the Institute of Forensic Sciences acknowledges the discrepancy between the title listed on Dr. Guale's degree and her testimony. Below is the statement from the Institute of Forensic Sciences in full.

Dr. Fessessework Guale is fully qualified to hold her current position at the IFS and to provide expert testimony in court. However, in response to feedback from the HCDAO regarding recent testimony from Dr. Guale, the new IFS Chief Toxicologist performed a review of Dr. Guale's credentials and some of her testimony. During the review, she identified a difference between the title listed on her degree and her testimony.

Dr. Guale has testified that she possesses a Master of Science degree in Toxicology. In fact, Dr. Guale's degree title is a Master of Science degree in Physiological Science; her master's program included coursework and thesis research in Toxicology. She has participated in continuing education in forensic toxicology throughout her professional career. Dr. Guale has earned certification by the American Board of Forensic Toxicology reflecting her knowledge, training, and experience in forensic toxicology.

IFS will review her previous testimonies to determine the extent of action necessary. In the meantime, Dr. Guale's duties have been reassigned pending courtroom testimony re-training.

So what does this mean? It could lead to cases being overturned.

This calls into question question the validity of all the verdicts and the pleas in every case she has been involved with," said Flood.

The Harris County Criminal Lawyer Association is demanding her immediate resignation and that the DA's office file aggravated perjury charges for false testimony.

:houston&taboola_utm_medium=bytaboola&taboola_utm_content=thumbnails-g:MIDARTICLE - 1:)
:houston&taboola_utm_medium=bytaboola&taboola_utm_content=thumbnails-g:MIDARTICLE - 1:)

FOX 26 HOUSTON

Expert witness credentials called into question on DWI cases

'Expert' witness under fire for false transcripts

Marcelino Benito, KHOU *10:12 PM. EST September 07, 2016*

HOUSTON - An expert witness with Harris County Institute of Forensic Sciences is under fire, accused of lying on the stand.

It puts nearly 10 years of DWI cases in jeopardy.

KHOU 11 News dug up court testimony transcripts that show Dr. Fessessework Guale, a toxicology operations manager at HCIFS, claimed to have a Master's of Science degree in Toxicology from Oklahoma State University.

It turns out that's not true.

"That's a lie, she has a masters in physiological sciences," said Tyler Flood. "But when you look closer it doesn't relate to humans."

Flood is a defense attorney and President of the Harris County Criminal Lawyer's Association. He says that lie on the stand impacts 60-75 of his clients and that's just the beginning.

"There's hundreds, hundreds," said Flood.

HCIFS first employed Dr. Guale back in 2000. She's climbed up the ranks over time and started testifying in DWI and other felony cases as an expert witness for the Harris County District Attorney's office in 2006.

"She needs to be credible," said Dr. Roger Kahn, director of Harris County's Crime Lab. "She needs to be accurate, and we need to be confident her testimony is reliable."

Dr. Kahn says when his office realized Dr. Guale was misrepresenting her credentials in court, they took action and notified the DA's office.

They've since alerted defense attorney's across our area to review their cases.

"Our reputation means everything to us," said Kahn.

Right now, that reputation is questionable in court. Dr. Guale does have a Doctorate in Veterinary Medicine from Ethiopia, but her toxicology training at Oklahoma State only relates to animals.

"We see which articles she's composed," said Flood. "Articles about rectal temperatures in donkeys."

Flood says cases need to be re-opened.

"Some people may be in prison right now for many, many years because of her testimony," said Flood.

The ME's office tells KHOU 11 News it does believe she's qualified, but is committed to getting to the bottom of why she lied in court.

"It's up to us to restore the credibility of the agency, to do a complete review until the community is satisfied," said Kahn.

Dr. Guale's duties have been reassigned pending courtroom testimony re-training and the completion of the investigation.

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NEWS (HTTP://WWW.CLICK2HOUSTON.COM/VIDEO)

Ten years of toxicology expert's testimony under review after credentials questioned

By **Keith Garvin (http://www.click2houston.com/author/keithgarvin)** - Anchor/Reporter

Posted: 5:03 PM, September 07, 2016
Updated: 11:06 PM, September 07, 2016

HOUSTON - The Harris County expert witness at the center of the most recent controversy for the district attorney's office is under fire for allegedly not telling the truth -- under oath -- about her education and expertise. It's a dilemma that could impact hundreds if not thousands of DWI cases dating back to 2006.

At her home in Pearland, Dr. Fessessework Guale called the matter a "misunderstanding."

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1 killed in shooting at Cypress apartment complex (/news/at-least-1-injured-in-cypress-shooting)

"My training is in toxicology but the degree says physiological sciences, which is a big area which toxicology is a sub part of it," says Guale. "It's called a sub discipline."

The DA's office informed a group of defense attorneys Tuesday that Guale may have testified in the past her masters was in toxicology -- when it, in fact, is in physiological sciences. Her testimony has been key in numerous DWI convictions over the past decade.

The president of the Harris County Criminal Lawyers Association says his and other groups will ask for Guale to be indicted and never again be allowed to testify in DWI cases.

"We're asking for her resignation, we're asking that all these cases be revisited that she was on," says Attorney Tyler Flood. "We're asking that the DA's office not designate her as an expert witness."

LATEST

The DA's office says its investigation has just begun and right now it is working to find out exactly how many cases Guale has testified in.

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Toxicologist in Houston reassigned amid credentials review

Posted: Sep 08, 2016 08:30 AM CDT
Updated: Sep 08, 2016 08:30 AM CDT

HOUSTON (AP) ��� A toxicologist with the Harris County Institute of Forensic Sciences has been reassigned amid a review of alleged discrepancies about her credentials.

Prosecutors this week notified some defense attorneys in Houston about issues related to Dr. Fessessework Guale (fuh-SES'-work gwayl). She's testified as a toxicology expert in drunken driving cases since 2006.

Tyler Flood, who's president of the Harris County Criminal Lawyers Association, says Guale should resign. Flood says her testimony could impact hundreds of cases.

Guale says it's all a misunderstanding and that her training is in toxicology, but her master's degree from Oklahoma State University says physiological sciences.

A statement Wednesday from the institute, which is Harris County's medical examiner, says Guale is fully qualified to hold her current position and to provide expert testimony in court.

Associated Press

Toxicologist in Houston reassigned amid credentials review

Posted: Thursday, September 8, 2016 9:30 am

HOUSTON (AP) — A toxicologist with the Harris County Institute of Forensic Sciences has been reassigned amid a review of alleged discrepancies about her credentials.

Prosecutors this week notified some defense attorneys in Houston about issues related to Dr. Fessessework Guale (fuh-SES'-work gwayl). She's testified as a toxicology expert in drunken driving cases since 2006.

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A statement Wednesday from the institute, which is Harris County's medical examiner, says Guale is fully qualified to hold her current position and to provide expert testimony in court.

NEWS

WOMAN RESPONDS TO ALLEGATIONS THAT SHE LIED ABOUT HER CREDENTIALS IN DWI CASES

EMBED </> | MORE NEWS VIDEOS

Toxicologist responds to claims she lied on her resume, Jessica Willey reports.

By Jessica Willey

Wednesday, September 07, 2016 10:53PM

HARRIS COUNTY (KTRK) -- The Harris County District Attorney is asking defense attorneys to review a decade's worth of their DWI cases looking for possible errant testimony from a Harris County toxicology witness.

According to a notice sent by the District Attorney's office Tuesday night, "Dr. Fessessework Guale of the Harris County Institute of Forensic Sciences may have testified in past trials that she received her Master's (sic) of Science degree in Toxicology when, in fact, she received her Master's (sic) of Science degree in Physiological Sciences (with coursework and research in toxicology)."

A review of Dr. Guale's resume however reveals that her degree is from a veterinary college. She also holds a doctorate in veterinary medicine from an Ethiopian veterinary school as well.

"I did not lie. It's just a misunderstanding. I actually told the truth," said Guale when questioned about the credentials at her home in Pearland.

Reporter: "You say you have a Masters in toxicology. Is that true?"

Guale: "My Masters is in Physiological Sciences which toxicology is a sub-discipline of."

Guale added she is board certified in forensic toxicology and maintains the basic science behind the effects of alcohol is the same in animals and humans. Guale testifies about a defendant's condition based on their blood/alcohol content.

NEWS

Woman's car in Corpus Christi Bay after mouse scare

Updated 15 mins ago

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Toxicology expert found not to have proper training for cases.

The Harris County Criminal Lawyers Association (HCCLA) is calling for criminal action against Guale, saying she perjured herself. Defendants may have been convicted based on her testimony, according to HCCLA President Tyler Flood.

The Harris County Institute of Forensic Sciences says Guale is being retrained. They are confident in her expertise despite the resume issues.

"There's nothing wrong, nothing to discipline. It's just a misunderstanding," Guale said.

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Toxicologist in Houston reassigned amid credentials review

Posted: Sep 08, 2016 8:37 AM CDT
Updated: Sep 08, 2016 8:37 AM CDT

HOUSTON (AP) - A toxicologist with the Harris County Institute of Forensic Sciences has been reassigned amid a review of alleged discrepancies about her credentials.

Prosecutors this week notified some defense attorneys in Houston about issues related to Dr. Fessessework Guale (fuh-SES'-work gwayl). She's testified as a toxicology expert in drunken driving cases since 2006.

Tyler Flood, who's president of the Harris County Criminal Lawyers Association, says Guale should resign. Flood says her testimony could impact hundreds of cases.

Guale says it's all a misunderstanding and that her training is in toxicology, but her master's degree from Oklahoma State University says physiological sciences.

A statement Wednesday from the institute, which is Harris County's medical examiner, says Guale is fully qualified to hold her current position and to provide expert testimony in court.

DWI cases under scrutiny after questions arise on expert's qualifications

Expert's résumé triggers audit of past 10 years

By Brian Rogers | September 7, 2016 | Updated: September 7, 2016 9:39pm

0

Photo: Robert Daly, Getty Images

Scales of justice on the judgeÃƒÂ•s bench

More than 10 years worth of DWI cases are under review after questions were raised about the qualifications of a county lab supervisor, according to the Harris County District Attorney's Office.

Brian Rogers

Legal Affairs Reporter,
Houston Chronicle

HEARST *newspapers*

EXHIBIT B

1. PERSON COMPLETING THIS FORM

Name: Michal Pierce, M.S., F-ABC
Laboratory: Harris County Institute of Forensic Sciences (HCIFS)
Address: 1885 Old Spanish Trail
City: Houston
State: Texas Zip Code: 77054
Home Phone:
Work Phone: 713-796-6915
Email Address *(if any)*: Michal.Pierce@ifs.hctx.net

2. SUBJECT OF DISCLOSURE

List the full name, address of the laboratory, facility or individual that is the subject of this disclosure:

Individual/Laboratory: Fessesework Guale of the HCIFS
Address: 1885 Old Spanish Trail
City: Houston
State: Texas Zip Code: 77054
Year Laboratory Accreditation Obtained: 1999
Name of National Accrediting Agency: ASCLD/LAB (and ABFT since 2004)
Date of Examination, Analysis, or Report:
Type of Forensic Analysis: Forensic Toxicology
Laboratory Case Number *(if known)*: various

Is the forensic analysis associated with any law enforcement investigation, prosecution or criminal litigation?
Yes [X] No [ ]

* If you answered "Yes" above, provide the following information *(if possible)*:

* Name of Defendant: Not one case specifically
* Case Number/Cause Number:
(if unknown, leave blank)
* Nature of Case:
(e.g burglary, murder, etc.)
* The county where case was investigated, prosecuted or filed: Harris
* The Court:
* The Outcome of Case:
* Names of attorneys in case on both sides *(if known)*:

3. WITNESSES

Provide the following about any person with factual knowledge or expertise regarding the facts of the disclosure. Attach separate sheet(s), if necessary.

First Witness *(if any)*:
Name: Teresa Gray, PhD, F-ABFT
Address: 1885 Old Spanish Trail, Houston, TX 77054
Daytime Phone: 713-796-6728
Evening Phone:
Fax:
Email Address: Teresa.Gray@ifs.hctx.net

Second Witness *(if any)*:
Name: Warren Samms, PhD, F-ABC
Address: 1885 Old Spanish Trail, Houston, TX 77054
Daytime Phone: 713-796-6728
Evening Phone:
Fax:
Email Address: Warren.Samms@ifs.hctx.net

Third Witness *(if any)*:
Name: Roger Kahn, PhD, F-ABC
Address: 1885 Old Spanish Trail, Houston, TX 77054
Daytime Phone: 713-796-6728
Evening Phone:
Fax:
Email Address: Roger.Kahn@ifs.hctx.net

4. DESCRIPTION OF DISCLOSURE

Please write a brief statement of the event(s), acts or omissions that are the subject of the disclosure. See Page 6 of this form for guidance on what information should be disclosed to the Commission.

Laboratory management conducted a review of Dr. Guale's credentials and training while evaluating her recent court testimonies. During this review it was discovered that she was misstating one of her degree titles when testifying as an expert witness. Dr. Guale holds a Master of Science degree in Physiological Science; however, she was testifying that she holds a Master of Science degree in Toxicology.

5. DESCRIPTION OF CORRECTIVE ACTION TAKEN

Please describe any corrective actions or corrective action plans the laboratory has developed to address the issues discussed in this disclosure. Please attach copies of the actions taken and/or future corrective plan to this disclosure form.

Please let the Commission know if any other agencies (e.g., Texas Rangers, local district attorney, Inspector General's Office, etc.) are also conducting an investigation of the matter in question. If possible, provide a contact name and phone number for the individual responsible for any other investigation(s).

Dr. Guale was counselled about her testimony. A rigorous expert testimony training plan was developed for her to complete as part of a performance improvement plan. Management disclosed this matter to the Harris County District Attorney's Office and requested that another expert be allowed to testify in her place until she satisfactorily completes her remedial training.

6. EXHIBITS AND ATTACHMENT(S)

Whenever possible, disclosures should be accompanied by readable copies **(NO ORIGINALS)** of any laboratory reports, relevant witness testimony, affidavits of experts about the forensic analysis, or other documents related to your disclosure. Please list and attach any documents that might assist the Commission in evaluating the disclosure. Documents provided will **NOT** be returned. List of attachments:

Attached is Dr. Guale's Master of Science degree and transcript.

~~A list of cases for which Dr. Guale has testified is currently being generated for the Harris County District Attorney's Office. Court transcripts from this list will be reviewed to determine which ones included testimony by Dr. Guale where she misstated her master's degree.~~
~~Assistant District Attorney Inger Chandler is handling the investigation at the Harris County District Attorney's Office. Her phone number is 713-274-6040.~~

7. YOUR SIGNATURE AND VERIFICATION

By signing below, I certify that the statements made by me in this disclosure are true. I also certify that any documents or exhibits attached are true and correct copies, to the best of my knowledge.

Signature:

Date Signed: September 8, 2016 - 11:28am

Luis A. Sanchez, M.D.
Executive Director &
Chief Medical Examiner

Texas Forensic Science Commission Complaint #16.48 and Disclosure #16.02

DESRCIPTION OF RESPONSIVE ATTACHMENTS

1) Attachment 1: The 2006 employment application of Fessessework Guale.

Information regarding the evaluation of her original application by current personnel is included in section 3.

2) Attachments 2a-2b: The SOP for testimony monitoring and the standard form used to evaluate staff testimony.

3) Attachments 3a-3d: Previous court testimony evaluations from 2009-2015; a signed performance improvement plan for Fessessework Guale in 2016; a root cause analysis of the reason for the credential misstatement; and the corrective action report.

4) Attachments 4a-4q: Curriculum vitae and Statement of Qualifications before the identified nonconformance; corrected curriculum vitae and Statement of Qualifications following the identified nonconformance; MS transcript and MS degree; DVM degree; several court testimony transcripts reviewed by current personnel during the laboratory's internal investigation.

Information regarding the laboratory's review is included in section 3.

5) The laboratory's investigation of the credentialing issue encompassed issues brought up in the allegations made by the Harris County Criminal Lawyers Association, as evident by the corrective action and performance improvement plan issued in August 2016. Therefore, there are no additional investigative records to provide. It should be noted that the IFS Quality Assurance Manager consistently reaches out to both the prosecution and defense counsel after employees testify to obtain evaluations from them. To date, nobody from Mr. Flood's office has returned an evaluation. Therefore, the complaint sent directly to the Commission was the first HCIFS heard of their concerns. Attachments 5a-5b are two examples of communication sent requesting feedback for Fessessework Guale's testimony.

June 14 first day.
$ 70,000

HARRIS COUNTY, TEXAS

APPLICATION FOR EMPLOYMENT

Please return application to:

Human Resources & Risk Management
1310 Prairie, Suite 240
Houston, Texas 77002

Job Hotline (713) 755-5044
Office (713) 755-5250
TDD (713) 755-6870
Internet Address:
www.hctx.net/hrrm

Please read the following before completing application. Applicants are considered without regard to race, color, religion, sex, national origin, age or disability. All questions must be answered. You may include your resume, however, RESUMES WILL NOT BE ACCEPTED AS A SUBSTITUTE FOR APPLICATIONS. Please type or print clearly (black or blue ink).

First Name	Middle Name	Last Name	Other Names
FESSESSEWORK	G[redacted]	Guale	

Current Address (Number/Street/City/State/Zip Code)	How Long?	Primary Number
2853 S. Biscay CT, Aurora, CO 80013	5+	(303) 315-7750
Previous Address (Number/Street/City/State/Zip Code)	**How Long?**	**Alternate Number**
18-2 North University Place, Stillwater, OK 74075	9	(720) 253-6308

Are you between 18-20 years old? ☐ / Are you at least 21 years old? ☒	Social Security Number: 442-02-9149	Are you authorized to work in the United States? ☒ Yes ☐ No

If you are an alien authorized by the Immigration and Naturalization Service to work in the United States, provide the following:
Alien Number: Citizen - USA or Admission Number: _____ Expiration of employment authorization, if any: _____

Please provide your date of birth (required for background check): 07/11/1963

Date you can start: Soon

REFERRED BY: _____

ANNOUNCEMENT NUMBER AND JOB TITLE 11364-P Toxicologist II

EDUCATION

	SCHOOL NAME	CITY / STATE	DIPLOMA/DEGREE
High School	Circle last grade completed: 1 2 3 4 5 6 7 8 9 10 11 12 GED Addis Ababa ETHIOPIA.	Ethiopia	Diploma
College/ Technical School	Addis Ababa University College of Veterinary Medicine	Ethiopia	DVM
College/ Technical School	Oklahoma State University	Stillwater/OK	MS

Major: Toxicology Minor: Physiological Sciences Graduate Studies: Toxicology
Undergraduate Hours: 202 Graduate Hours: 28 *Transcripts may be required.

OFFICE USE ONLY

_____ P / DNP Typing 1 2 Date _____ WPM _____ Acc _____

Aptitude A B Date _____ Alpha _____ Num _____ Spell _____ Avg _____

GENERAL DATA

Answer items 1 through 6 by placing an "X" in the proper column.

	YES	NO
1. Are you now working for or have you previously worked for Harris County? If yes, under what name?	☐	☒
2. Do you or does your spouse have any relatives presently working for or holding office in Harris County Government? If yes, please list the name(s), relationship and the department in which employed.	☐	☒
3. Are you aware of any reason which would keep you from being bonded? If yes, describe.	☐	☒
4. Are you licensed to operate a motor vehicle? ☒ Driver's License Number: 00-203-1394 State: CO Class: R Expiration: 07-11-2011 ☐ Identification Endorsements:	☒	☐
5. Are you willing to work the hours assigned?	☒	☐
6. Have you ever been convicted of an offense? Please include driving while intoxicated or driving under the influence of drugs. (Exclude minor traffic violations.)	☐	☒

7. Other language(s) fluently **Spoken:** Amharic **Read:** Amharic **Write:** Amharic

8. **Machine and equipment skills:**	**Typing–WPM:**	**PC software applications:**
GC, GC/MS, LC/MS, HPLC ELISA, TCC etc.		CIMS

9. Special qualifications and skills: (Use this space to indicate any experience, skills, licenses, or certificates, etc., which in your opinion would qualify you for the position you seek.)

- Board Certified Toxicologist (ABVT)
- Grant writing, Research and publication.
- Laboratory management.
- Consultation and training
- Expert witness.

EMPLOYMENT HISTORY

Employer	Supervisor and Title
University of Colorado Health Sciences Center.	Dr. James A. Rush/Toxicologist
Address (Number/Street/City/State/Zip Code)	**Job Title**
4200 E 9th Ave, Denver, CO 80262	Research Associate / Toxicologist

From (Month/Year)	To (Month/Year)	Final Salary	No. of Persons Supervised	
11/2000	Present	60,000	4	Full Time ☒
Reason for Leaving: Still Working		May we contact this employer? ☒ Yes ☐ No Phone Number: (303) 315-7569		Part Time ☐ Temporary ☐

Duties: Manage the day to day operation of the Forensic Toxicology Laboratory, Supervise personel, Develop and validate analytical methods, Assure QA/QC, compliance for accreditation Consult with medical examiners and law enforcement agents Testify in court as an expert witness.

Employer	Supervisor and Title
Oklahoma State University Animal Disease Diagnostic Lab.	Dr. Sandra Morgan / Toxicologist
Address (Number/Street/City/State/Zip Code)	**Job Title**
University Place, Stillwater, OK 74075	Lab Technologist

From (Month/Year)	To (Month/Year)	Final Salary	No. of Persons Supervised	Full Time	Part Time	Temporary
12/1991	6/2000	30,000	None	☒	☐	☐

Reason for Leaving:	May we contact this employer?	Phone Number:
Relocation of family	☒ Yes ☐ No	(405) 744-6623

Duties: Analyse biological, environmental and feed samples for, pesticides, Heavy metals, drugs, feed additives and other plant toxins using, GC, GC/MS, TLC, ELISA HPLC, Flame and graphite AA, and Bench chemistry.

Employer	Supervisor and Title
Addis Ababa University College of Agriculture	Dr. Gosshu Wolde
Address (Number/Street/City/State/Zip Code)	**Job Title**
Debre Zeit, Ethiopia	Lecturer

From (Month/Year)	To (Month/Year)	Final Salary	No. of Persons Supervised	Full Time	Part Time	Temporary
07/1990	08/1991	30,000	none	☒	☐	☐

Reason for Leaving:	May we contact this employer?	Phone Number:
Coming to America.	☐ Yes ☒ No not available	( )

Duties: Lecture to Students of Agriculture department of Animal Science - Title of the lecture wase Animal physiology. Provide practical training on Animal Husbandry.

Employer	Supervisor and Title
Address (Number/Street/City/State/Zip Code)	**Job Title**

From (Month/Year)	To (Month/Year)	Final Salary	No. of Persons Supervised	Full Time	Part Time	Temporary
				☐	☐	☐

Reason for Leaving:	May we contact this employer?	Phone Number:
	☐ Yes ☐ No	( )

Duties:

Employer		Supervisor and Title		
Address (Number/Street/City/State/Zip Code)		Job Title		
From (Month/Year)	To (Month/Year)	Final Salary	No. of Persons Supervised	Full Time ☐
Reason for Leaving:		May we contact this employer? ☐Yes ☐No Phone Number: ( )		Part Time ☐ Temporary ☐
Duties:				

REFERENCES

List three persons other than relatives who have definite knowledge of your qualifications.

Full Name	Home or Business Address (Number/Street/City/State/Zip Code)	Phone Number	Business or Occupation	Years Acquainted
James A. Ruth	4200 E 9th, Denver, Co 80262	(303) 315-7569	F. Toxicologist	5+
Karyn Bischoff	Cornell University Ithaca, NY 14853	(607) 253-3900	Toxicologist	10
Sandra Morgan	Oklahoma State University Animal Diag-Lab	(405) 744-6623	Toxicologist	10

By submitting and signing this application, I authorize and request any public or private business or other employee for whom I have worked or been employed, or with whom I have sought employment, to supply Harris County with any and all records pertaining to me that have been kept in the usual course of business, including but not limited to; drug and alcohol test results obtained within six months of the date of request for information by Harris County. The information obtained may be used by Harris County in making decisions with regard to my employment.

I authorize investigation of all statements contained in this application. I certify that there are no willful misrepresentations, omissions or falsifications in the foregoing statements and answers to questions. I am aware that should an investigation disclose any misrepresentation, omission or falsification, my application may be rejected, or if already employed, my employment may be terminated. References and previous employer will be contacted to confirm statements unless otherwise indicated. I also understand that if offered employment by Harris County, will be required to pass a drug test as a condition of employment.

APPLICATIONS WILL NOT BE CONSIDERED UNLESS SIGNED & DATED AND ALL QUESTIONS ARE ANSWERED

DATE: 4/25/06 **APPLICANT'S SIGNATURE:** [redacted]

Revised 8/2005

Fessessework Guale, DVM, MS, D. ABVT
2853 S. Biscay CT
Aurora, CO 80013
Phone: 303-315-7750
E-mail: fessessework.guale@uchsc.edu

Education

1993-1996: Oklahoma State University, Stillwater, Oklahoma.
MS. Toxicology, Physiological Sciences, College of Veterinary Medicine.

1985-1990: Addis Ababa University, Ethiopia.
DVM. College of Veterinary Medicine

1979-1981: Addis Ababa University, Ethiopia.
BS. Animal Science, College of Agriculture.

Professional Experience

11/2000- Present: **Research Associate/Toxicologist**, University of Colorado Health Sciences Center.
Research: Drug disposition to hair and its application to diagnostic toxicology. Study the chemical mechanism underlying drug accumulation and stability of drugs in hair, by utilizing both In-vitro and In-vivo methods.
Laboratory management: Establish a Veterinary Drug testing section in a Forensic toxicology Laboratory:
Manage the day to day activity of the laboratory and personnel.
Develop, validate and apply new analytical methods to identify and Quantify drugs and toxins.
Serve as an expert witness in a court of law.
Consultation: Consult with veterinarians, animal owners, Law enforcement agencies, and medical examiners and provide diagnostic service.

9/2000-11/2000: **QC Supervisor**, Industrial Laboratories Inc., Denver, CO
Review Analytical data generated from GC, GC/MS, HPLC, ICP, AA, Wet chemistry and microbiology.
Validate method and standard operating procedures.
Assure adequate quality control measures are taken.
Assure GLP and cGMP compliance.

1/1992-7/2000: **Analytical Toxicologist**, Oklahoma Animal Disease Diagnostic Laboratory.
Analyze biological, environmental and feed samples for chemicals such as, drugs, Pesticides, heavy metals mycotoxins feed additives, petroleum hydrocarbons and other toxins.
Operate and troubleshoot analytical instruments such as, GC, GC/MS, HPLC, GFAA, TLC, ELISA and wet chemistry.
Consult with clients and provide diagnostic service.
Perform research to improve and develop new analytical methods.
Provide training to residents in analytical toxicology.

Achievements

Diplomate, American Board of Veterinary Toxicology, July 1999
Academic Excellence Award, College of Veterinary Medicine, July 1990
Academic Excellence Award, College of Agriculture, June 1981

Publications

K. Bischoff, **F. Guale**: Australian Tea Tree (*Melaleuca alternifolia)* oil poisoning In three pure bred cats. Journal of Veterinary Diagnostic Investigation, Volume 10.1998, pages 208-210.

F. Guale, G. Burrows: Evaluation of Chick Embryo Motoneuron Cultures for the Study of Neurotoxicity. Natural Toxins, Volume 5, Number 3, 1997, pages 115-120.

F. Guale, EL. Stair, WB. Johnson, WC. Edwards, JC. Haliburton: Laboratory Diagnosis of Zinc Phosphide Poisoning. Veterinary and Human Toxicology, Volume 36, Number 6, December 1994, pages 517-519.

References

James A. Ruth, PhD, D. ABFT
University of Colorado Health Sciences Center
School of Pharmacy, C-238
4200 East Ninth Avenue
Denver, CO 80262
Phone: 303-315-7569

Sandra Morgan, DVM, MS, D. ABVT
Oklahoma Animal Disease Diagnostic Lab
Stillwater, OK 74078
Phone: 405-744-6623

Karyn Bischoff, DVM, MS, D. ABVT
Cornell University
Ithaca, NY 14853
Phone: 607-253-3900

Harris County Institute of Forensic Sciences		
Section: Quality Management	Approved by: Quality Director	
Document Type: Quality Procedure	Procedure No.: QP08.0022	
Title: Testimony Monitoring		Rev.: 6

1.0 Purpose

1.1 This document describes the procedure used to monitor the court testimony of testifying personnel.

1.2 This procedure details the responsibilities of testifying personnel in regards to their court testimony.

2.0 Scope

2.1 This procedure applies to all testifying personnel of the laboratory

3.0 Definitions and Abbreviations

3.1 Not Applicable

4.0 Materials

4.1 Not Applicable

5.0 Procedure

5.1 The testimony of all testifying personnel will be monitored at least once each calendar year in which they testify. The testimony monitoring will be performed as follows:

5.1.1 As soon as an analyst is notified that their testimony is required, the analyst will notify the Quality Manager by email, copying his/her supervisor.

A. The email will include at a minimum the HCIFS case number, courtroom number, ADA name, and the approximate time he/she is expected at court. If the court case number is known, that should be included in the email as well.

5.1.2 The Quality Manager or designee will request a laboratory manager/supervisor, a Quality Management staff member, or an officer of the court to monitor the testimony.

5.1.3 A testimony evaluation form (QAF08.006) will be provided to the evaluator.

5.1.4 The testimony evaluator will complete the form and return it back to the Quality Manager.

5.1.5 Managers will review the evaluation form with the testifying analyst. The manager and analyst will document the feedback by signing the evaluation form.

5.1.6 The testimony evaluation form will then be forwarded back to the Quality

Manager or Quality Director for review.

5.1.7 The testimony evaluation forms are uploaded into Q-Pulse once completed.

5.2 Court testimony evaluation may be accomplished through telephonic solicitation or by direct observation.

5.3 Corrective action shall be taken if the evaluation is less than "Acceptable".

5.3.1 Corrective action may be in the form of counseling, additional training, and/or retaking Moot Court.

5.4 Testifying personnel shall abide by the rules of the court as applicable, and testimony shall be presented in a professional and technically competent manner.

5.5 Testifying personnel or expert witnesses are responsible for the following:

5.5.1 Complying with a subpoena or attorney directive regarding the place and time of the appearance. The analyst is responsible for preparing for his or her testimony for consulting as necessary with the attorney, and for the preparation of all necessary notes.

5.5.2 Dealing with scheduling conflicts.
If a schedule or other conflict exists which will potentially prevent the analyst from appearing in court as requested, it is the responsibility of the analyst to notify the submitting agency or the subpoenaing party as soon as possible.

5.5.3 Dealing with testimony conflicts.
If the analyst has been asked to provide testimony on a subject with which he or she is not familiar with, he or she must notify the Section Manager/Director or Crime Laboratory Director and the submitting agency.

5.5.4 Maintaining technical competency in their area of expertise.
If the analyst feels that he or she is deficient in the knowledge needed to provide accurate testimony, the analyst is responsible to inform the Section Manager/Director of the deficiency. The Section Manager/Director shall take appropriate remedial actions as soon as possible.

5.5.5 Maintaining professional demeanor at all times.
Business attire is required.

5.5.6 Being technically prepared for testimony.

The analyst must be familiar with his /her laboratory notes, the final report provided to the submitting agency and related articles or technical information prior to the testimony. The analyst shall be able to answer questions that are reasonably anticipated without fumbling through papers. The testimony should be previously discussed with the attorney to prepare the expert for the line of questioning anticipated.

5.5.7 Being organized.
All paperwork shall be organized and properly labeled.

5.5.8 Providing fair and impartial testimony.
Testimony must be presented in a manner that is accurately interpreted and properly weighted. Testimony shall be geared toward the layperson. When necessary, technical terms shall be defined. If asked to provide a Yes or No answer where either answer would be inappropriate or misleading, the witness should indicate to the attorney that the question cannot be answered with a simple Yes or No answer.

5.5.9 Discussing only topics presented.
The witness is not allowed to volunteer information about evidence that has not been presented or about topics not discussed.

5.5.10 Following ethical conduct.
When testifying, the Crime laboratory staff shall use those sections of the Code of Ethics dealing with courtroom testimony.

5.5.11 Rendering a complete opinion.
When rendering an opinion, it is the responsibility of the analyst to give a complete opinion.

6.0 Data Analysis / Interpretation/ Documentation

6.1 Not Applicable

7.0 Acceptance Criteria

7.1 Not Applicable

8.0 References

8.1 International Standards ISO/IEC 17025: 2005 General requirements for the competence of testing and calibration laboratories, 2nd edition, International Standards Organization (ISO)/International Electrotechnical Commission (IEC), 2005.

8.2 ASCLD/LAB International, Supplemental requirements for the accreditation of forensic testing laboratories, 2011 Edition, Ver. 1.1 T.

9.0 Revision History

Revision	Description of Change	Reviewed By	Date
0	Excerpt from 2007 Quality Assurance Manual, Section 4.0	TC	0508
1	Reformatting	TC/MNV	0708
2	Added 5.1 and updated 5.2 and 5.3	C. Young	0609
3	Document Changed To Reflect New Name	AS	04/16/10
4	Updated section 8.2 to new edition	TC	1211
5	Updated header	MLP	0813
6	Edited section 5.1	MLP	0414

Harris County Institute of Forensic Sciences		
Section: Quality Management	Approved by: Quality Director	
Document Type: Quality Procedure	Procedure No.: QP08.0022	
Title: Testimony Monitoring		Rev.: 6

1.0 Purpose

1.1 This document describes the procedure used to monitor the court testimony of testifying personnel.

1.2 This procedure details the responsibilities of testifying personnel in regards to their court testimony.

2.0 Scope

2.1 This procedure applies to all testifying personnel of the laboratory

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A. The email will include at a minimum the HCIFS case number, courtroom number, ADA name, and the approximate time he/she is expected at court. If the court case number is known, that should be included in the email as well.

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Manager or Quality Director for review.

5.1.7 The testimony evaluation forms are uploaded into Q-Pulse once completed.

5.2 Court testimony evaluation may be accomplished through telephonic solicitation or by direct observation.

5.3 Corrective action shall be taken if the evaluation is less than "Acceptable".

5.3.1 Corrective action may be in the form of counseling, additional training, and/or retaking Moot Court.

5.4 Testifying personnel shall abide by the rules of the court as applicable, and testimony shall be presented in a professional and technically competent manner.

5.5 Testifying personnel or expert witnesses are responsible for the following:

5.5.1 Complying with a subpoena or attorney directive regarding the place and time of the appearance. The analyst is responsible for preparing for his or her testimony for consulting as necessary with the attorney, and for the preparation of all necessary notes.

5.5.2 Dealing with scheduling conflicts.
If a schedule or other conflict exists which will potentially prevent the analyst from appearing in court as requested, it is the responsibility of the analyst to notify the submitting agency or the subpoenaing party as soon as possible.

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5.5.4 Maintaining technical competency in their area of expertise.
If the analyst feels that he or she is deficient in the knowledge needed to provide accurate testimony, the analyst is responsible to inform the Section Manager/Director of the deficiency. The Section Manager/Director shall take appropriate remedial actions as soon as possible.

5.5.5 Maintaining professional demeanor at all times.
Business attire is required.

5.5.6 Being technically prepared for testimony.

The analyst must be familiar with his /her laboratory notes, the final report provided to the submitting agency and related articles or technical information prior to the testimony. The analyst shall be able to answer questions that are reasonably anticipated without fumbling through papers. The testimony should be previously discussed with the attorney to prepare the expert for the line of questioning anticipated.

5.5.7 Being organized.
All paperwork shall be organized and properly labeled.

5.5.8 Providing fair and impartial testimony.
Testimony must be presented in a manner that is accurately interpreted and properly weighted. Testimony shall be geared toward the layperson. When necessary, technical terms shall be defined. If asked to provide a Yes or No answer where either answer would be inappropriate or misleading, the witness should indicate to the attorney that the question cannot be answered with a simple Yes or No answer.

5.5.9 Discussing only topics presented.
The witness is not allowed to volunteer information about evidence that has not been presented or about topics not discussed.

5.5.10 Following ethical conduct.
When testifying, the Crime laboratory staff shall use those sections of the Code of Ethics dealing with courtroom testimony.

5.5.11 Rendering a complete opinion.
When rendering an opinion, it is the responsibility of the analyst to give a complete opinion.

6.0 Data Analysis / Interpretation/ Documentation

6.1 Not Applicable

7.0 Acceptance Criteria

7.1 Not Applicable

8.0 References

8.1 International Standards ISO/IEC 17025: 2005 General requirements for the competence of testing and calibration laboratories, 2nd edition, International Standards Organization (ISO)/International Electrotechnical Commission (IEC), 2005.

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1	Reformatting	TC/MNV	0708
2	Added 5.1 and updated 5.2 and 5.3	C. Young	0609
3	Document Changed To Reflect New Name	AS	04/16/10
4	Updated section 8.2 to new edition	TC	1211
5	Updated header	MLP	0813
6	Edited section 5.1	MLP	0414

TESTIMONY EVALUATION

Witness name: F. Guale

Date of testimony: 9-16-09 Lab Case No.: HPD

Called as witness for: *Prosecution* ☒ *Defense* ☐

Evaluation Method: *Direct Observation* ☒ *Telephone Interview* ☐

If telephone: Attorney's name: _____ Phone No.: _____

(For telephone interviews contact the attorney who subpoenaed the witness for court.)	YES	NO	N/A
1. Was the witness prepared for court?	☐	☐	
2. Did the witness have to refer to the case file excessively to answer the questions?	☐	☐	X
3. Was the witness' appearance suitable for court? (professional business attire)	☒	☐	
4. Did the witness speak clearly and distinctly?	☐	☐	Speak at microphone
5. Did the witness answer questions without volunteering any unnecessary information?	☒	☐	
6. Did the witness answer questions directly and objectively for the prosecution?	☒	☐	☐
7. Did the witness answer questions directly and objectively for the defense?	☒	☐	☐
8. Was the witness' overall demeanor professional?	☒	☐	
9. Did the witness exhibit appropriate knowledge of his/her technical subject?	☐	☐	☐
10. Did the witness testify within limits of the report?	☑	☐	NAX
11. Did the witness explain technical procedures with terminology the jury could understand?	☒	☐	☐
12. Did the witness maintain composure under cross-examination?	☒	☐	☐
13. If visual aids were utilized, were they professional in appearance and an effective means of educating the jury?	☐	☐	☒ 1

OVERALL RATING

Outstanding ☐ Acceptable ☒ Needs Improvement ☐ Unacceptable ☐

Additional Comments: Use back of form or attach document if necessary.
(Comments are mandatory for an overall rating of Needs Improvement or Unacceptable and for improvements needed on any of the individual topics.)

Must improve on interpretation of Drug Combinations and extrapolation to prior times.

Evaluated by: T. Danielson Date of evaluation: 9-16-09

Review and feedback given by Manager:

Manager's signature: _____ Witness's signature: F. Guale

Date:

Harris County Institute of Forensic Sciences
COURT TESTIMONY EVALUATION

Witness name: Dr. Guale Fessework

Date of testimony: Nov. 10, 2010 Lab Case No.: JAJ-09-009234

Called as witness for: Prosecution ☒ Defense ☐

Evaluation Method: Direct Observation ☒; Telephone Interview ☐

If telephone: Attorney's name: Phone No.:
(For telephone interviews contact the attorney who subpoenaed the witness for court.)

	Rating Scale	Outstanding	Good	Acceptable	Needs Improvement	Unacceptable	Not Applicable
1	The witness was prepared for court.	☐	☒	☐	☐	☐	☐
2	The witness did not have to refer to the case file excessively to answer the questions.	☐	☒	☐	☐	☐	☐
3	The witness' appearance was suitable for court. (Professional business attire)	☒	☐	☐	☐	☐	☐
4	The witness spoke clearly and distinctly.	☐	☐	☒	☐	☐	☐
5	The witness answered questions without volunteering any unnecessary information.	☐	☒	☐	☐	☐	☐
6	The witness answered questions directly and objectively for the prosecution.	☐	☒	☐	☐	☐	☐
7	The witness answered questions directly and objectively for the defense.	☐	☐	☒	☐	☐	☐
8	The witness' overall demeanor was professional.	☐	☐	☒	☐	☐	☐
9	The witness exhibited appropriate knowledge of his/her technical subject.	☒	☐	☐	☐	☐	☐
10	The witness testified within limits of the report.	☒	☐	☐	☐	☐	☐
11	The witness explained technical procedures with terminology the jury could understand.	☐	☒	☐	☐	☐	☐
12	The witness maintained composure under cross-examination.	☐	☐	☒	☐	☐	☐
13	If visual aids were utilized, they were professional in appearance and an effective means of educating the jury.	☒	☐	☐	☐	☐	☐

Additional Comments:

Evaluated by: Catherine Evans Date of evaluation: February 21, 2011
Review and feedback by Manager:

Manager's signature: A. R. Witness's signature: F. Guale Date: 2/28/11

Quality Assurance Review: Cynthia Young Date of Review: 2/28/11

Harris County Institute of Forensic Sciences
COURT TESTIMONY EVALUATION

Witness name: Dr. Gvale

Date of testimony: 5.18.11 Lab Case No.: JJJ 01-009853

Called as witness for: Prosecution ☒ Defense ☐

Evaluation Method: Direct Observation ☒; Telephone Interview ☐

If telephone: Attorney's name: Phone No.:
(For telephone interviews contact the attorney who subpoenaed the witness for court.)

	Rating Scale	Outstanding	Good	Acceptable	Needs Improvement	Unacceptable	Not Applicable
1	The witness was prepared for court.	☐	☑	☐	☐	☐	☐
2	The witness did not have to refer to the case file excessively to answer the questions.	☐	☐	☐	☐	☐	☑
3	The witness' appearance was suitable for court. (Professional business attire)	☐	☑	☐	☐	☐	☐
4	The witness spoke clearly and distinctly.	☐	☐	☑	☐	☐	☐
5	The witness answered questions without volunteering any unnecessary information.	☐	☑	☐	☐	☐	☐
6	The witness answered questions directly and objectively for the prosecution.	☐	☑	☐	☐	☐	☐
7	The witness answered questions directly and objectively for the defense.	☐	☑	☐	☐	☐	☐
8	The witness' overall demeanor was professional.	☐	☑	☐	☐	☐	☐
9	The witness exhibited appropriate knowledge of his/her technical subject.	☑	☐	☐	☐	☐	☐
10	The witness testified within limits of the report.	☐	☑	☐	☐	☐	☐
11	The witness explained technical procedures with terminology the jury could understand.	☑	☐	☐	☐	☐	☐
12	The witness maintained composure under cross-examination.	☑	☐	☐	☐	☐	☐
13	If visual aids were utilized, they were professional in appearance and an effective means of educating the jury.	☐	☐	☐	☐	☐	☑

Additional Comments: The Jury really liked Dr. Gvale. One thing, please don't mention animal toxicology as much.

Evaluated by: Date of evaluation:

Review and feedback by Manager:

Manager's signature: [signature] Witness's signature: F. Gvale Date: 5/20/11

Quality Assurance Review: Cynthia Young Date of Review: 5/20/11

Young, Cynthia (IFS)

From: Wu, Eugene (HCDA)
Sent: Thursday, May 19, 2011 5:05 PM
To: Young, Cynthia (IFS)
Subject: FW:
Attachments: [Untitled].pdf

Please see attached

-----Original Message-----
From: Color MisdSouth@dao.hctx.net [mailto:Color MisdSouth@dao.hctx.net]
Sent: Thursday, May 19, 2011 5:04 PM
To: Wu, Eugene
Subject:

Please open the attached document. This document was digitally sent to you using an HP Digital Sending device.

Harris County Institute of Forensic Sciences

10:03-10,48

COURT TESTIMONY EVALUATION

Witness name: Fessessework Gwale

Date of testimony: 1/9/12 Lab Case No.: JAS-10-7345

Called as witness for: Prosecution ☒ Defense ☐

Evaluation Method: Direct Observation ☒; Telephone Interview ☐

If telephone: Attorney's name: LAWRENCE WILSON Phone No.: 713-659-5200

(For telephone interviews contact the attorney who subpoenaed the witness for court.)

	Rating Scale	Outstanding	Good	Acceptable	Needs Improvement	Unacceptable	Not Applicable
1	The witness was prepared for court.	☒	☐	☐	☐	☐	☐
2	The witness did not have to refer to the case file excessively to answer the questions.	☒	☐	☐	☐	☐	☐
3	The witness' appearance was suitable for court. (Professional business attire)	☒	☐	☐	☐	☐	☐
4	The witness spoke clearly and distinctly.	☒	☐	☐	☐	☐	☐
5	The witness answered questions without volunteering any unnecessary information.	☒	☐	☐	☐	☐	☐
6	The witness answered questions directly and objectively for the prosecution.	☒	☐	☐	☐	☐	☐
7	The witness answered questions directly and objectively for the defense.	☒	☐	☐	☐	☐	☐
8	The witness' overall demeanor was professional.	☒	☐	☐	☐	☐	☐
9	The witness exhibited appropriate knowledge of his/her technical subject.	☒	☐	☐	☐	☐	☐
10	The witness testified within limits of the report.	☒	☐	☐	☐	☐	☐
11	The witness explained technical procedures with terminology the jury could understand.	☒	☐	☐	☐	☐	☐
12	The witness maintained composure under cross-examination.	☒	☐	☐	☐	☐	☐
13	If visual aids were utilized, they were professional in appearance and an effective means of educating the jury.	☐	☐	☐	☐	☐	☒

Additional Comments:

Evaluated by: Lawrence Wilson Date of evaluation: 1-19-12

Review and feedback by Manager:

Manager's signature: [signature] Witness's signature: FGwale Date: 1/19/12

Quality Assurance Review: Cynthia Young Date of Review: 2/8/12

Harris County Institute of Forensic Sciences
COURT TESTIMONY EVALUATION

Witness name: Dr. Guale

Date of testimony: 1/19/2012 Lab Case No.: JAS-10-7375

Called as witness for: Prosecution [X] Defense [ ]

Evaluation Method: Direct Observation [X]; Telephone Interview [ ]

If telephone: Attorney's name: Denise Adkison-Brown Phone No.:
(For telephone interviews contact the attorney who subpoenaed the witness for court.)

	Rating Scale	Outstanding	Good	Acceptable	Needs Improvement	Unacceptable	Not Applicable
1	The witness was prepared for court.	X					
2	The witness did not have to refer to the case file excessively to answer the questions.		X				
3	The witness' appearance was suitable for court. (Professional business attire)	X					
4	The witness spoke clearly and distinctly.	X					
5	The witness answered questions without volunteering any unnecessary information.		X				
6	The witness answered questions directly and objectively for the prosecution.		X				
7	The witness answered questions directly and objectively for the defense.		X				
8	The witness' overall demeanor was professional.	X					
9	The witness exhibited appropriate knowledge of his/her technical subject.	X					
10	The witness testified within limits of the report.	X					
11	The witness explained technical procedures with terminology the jury could understand.	X					
12	The witness maintained composure under cross-examination.	X					
13	If visual aids were utilized, they were professional in appearance and an effective means of educating the jury.	X					

Additional Comments: Thank you for your time.

Evaluated by: [signature] Date of evaluation: 1/19/2012

Review and feedback by Manager:

Manager's signature: [signature] Witness's signature: [signature] Date: 1/19/12

Quality Assurance Review: [signature] Date of Review: 2/8/12

Harris County Institute of Forensic Sciences
COURT TESTIMONY EVALUATION

Witness name: Fessessework Quale

Date of testimony: 10-31-2012 Lab Case No.: ML10-1351

Called as witness for: Prosecution ☒ Defense ☐

Evaluation Method: Direct Observation ☒; Telephone Interview ☐

If telephone: Attorney's name: Sherry L. Robinson Phone No.: 281-344-4470
(For telephone interviews contact the attorney who subpoenaed the witness for court.)

	Rating Scale	Outstanding	Good	Acceptable	Needs Improvement	Unacceptable	Not Applicable
1	The witness was prepared for court.	☐	☒	☐	☐	☐	☐
2	The witness did not have to refer to the case file excessively to answer the questions.	☒	☐	☐	☐	☐	☐
3	The witness's appearance was suitable for court. (Dress, hair, witness attire)	☒	☐	☐	☐	☐	☐
4	The witness spoke clearly and distinctly.	☐	☒	☐	☐	☐	☐
5	The witness answered questions without volunteering any unnecessary information.	☐	☐	☒	☐	☐	☐
6	The witness answered questions directly and objectively for the prosecution.	☐	☒	☐	☐	☐	☐
7	The witness answered questions directly and objectively for the defense.	☐	☒	☐	☐	☐	☐
8	The witness' overall demeanor was professional.	☐	☒	☐	☐	☐	☐
9	The witness exhibited appropriate knowledge of the subject matter.	☒	☐	☐	☐	☐	☐
10	The witness testified within limits of the report.	☐	☐	☒	☐	☐	☐
11	The witness explained technical procedures with terminology the jury could understand.	☐	☒	☐	☐	☐	☐
12	The witness maintained composure under cross-examination.	☐	☒	☐	☐	☐	☐
13	If visual aids were utilized, they were professional, current, accurate and effective means of educating the jury.	☐	☐	☐	☐	☐	☒

Additional Comments:

Evaluated by: Date of evaluation:
Review and feedback by Manager:

Manager's signature: _____ Witness's signature: F Quale Date: 12-18-12

Quality Assurance Review: Cynthia Young Date of Review: 12/21/12

Harris County Institute of Forensic Sciences
COURT TESTIMONY EVALUATION

Witness name: Dr. Fessessework Guale

Date of testimony: 3/21/13 Lab Case No.: IFS12-06340

Called as witness for: Prosecution ☒ Defense ☐

Evaluation Method: Direct Observation ☒; Telephone Interview ☐

If telephone: Attorney's name: Cordt Akers Phone No.: 713 755 5853
(For telephone interviews contact the attorney who subpoenaed the witness for court.)

	Rating Scale	Outstanding	Good	Acceptable	Needs Improvement	Unacceptable	Not Applicable
1	The witness was prepared for court.	☒	☐	☐	☐	☐	☐
2	The witness did not have to refer to the case file excessively to answer the questions.	☒	☐	☐	☐	☐	☐
3	The witness' appearance was suitable for court. (Professional business attire)	☒	☐	☐	☐	☐	☐
4	The witness spoke clearly and distinctly.	☒	☐	☐	☐	☐	☐
5	The witness answered questions without volunteering any unnecessary information.	☒	☐	☐	☐	☐	☐
6	The witness answered questions directly and objectively for the prosecution.	☒	☐	☐	☐	☐	☐
7	The witness answered questions directly and objectively for the defense.	☒	☐	☐	☐	☐	☐
8	The witness' overall demeanor was professional.	☒	☐	☐	☐	☐	☐
9	The witness exhibited appropriate knowledge of his/her technical subject.	☒	☐	☐	☐	☐	☐
10	The witness testified within limits of the report.	☒	☐	☐	☐	☐	☐
11	The witness explained technical procedures with terminology the jury could understand.	☒	☐	☐	☐	☐	☐
12	The witness maintained composure under cross-examination.	☒	☐	☐	☐	☐	☐
13	If visual aids were utilized, they were professional in appearance and an effective means of educating the jury.	☒	☐	☐	☐	☐	☐

Additional Comments:
Dr . Guale did an excellent job. Answered questions clearly, precisely, and stood her ground on hard questioning from opposing counsel. I could not have asked for a more professional witness.

Evaluated by: Cordt Akers Date of evaluation: 3/21/13
Review and feedback by Manager: Fantastic review 8/9/13

Manager's signature: _____ Witness's signature: F Guale Date: 8/14/13

Quality Assurance Review: Cynthia Young Date of Review: 8/14/13

Harris County Institute of Forensic Sciences
COURT TESTIMONY EVALUATION

Witness name: Fessessework Guale

Date of testimony: 1/14/15 Lab Case No.: IFS13-12745

Called as witness for: Prosecution ☒ Defense ☐

Evaluation Method: Direct Observation☐; Telephone Interview ☐

If telephone: Attorney's name: Phone No.:
(For telephone interviews contact the attorney who subpoenaed the witness for court.)

	Rating Scale	Outstanding	Good	Acceptable	Needs Improvement	Unacceptable	Not Applicable
1	The witness was prepared for court.	☒	☐	☐	☐	☐	☐
2	The witness did not have to refer to the case file excessively to answer the questions.	☒	☐	☐	☐	☐	☐
3	The witness' appearance was suitable for court. (Professional business attire)	☒	☐	☐	☐	☐	☐
4	The witness spoke clearly and distinctly.	☒	☐	☐	☐	☐	☐
5	The witness answered questions without volunteering any unnecessary information.	☒	☐	☐	☐	☐	☐
6	The witness answered questions directly and objectively for the prosecution.	☒	☐	☐	☐	☐	☐
7	The witness answered questions directly and objectively for the defense.	☒	☐	☐	☐	☐	☐
8	The witness' overall demeanor was professional.	☒	☐	☐	☐	☐	☐
9	The witness exhibited appropriate knowledge of his/her technical subject.	☒	☐	☐	☐	☐	☐
10	The witness testified within limits of the report.	☒	☐	☐	☐	☐	☐
11	The witness explained technical procedures with terminology the jury could understand.	☒	☐	☐	☐	☐	☐
12	The witness maintained composure under cross-examination.	☒	☐	☐	☐	☐	☐
13	If visual aids were utilized, they were professional in appearance and an effective means of educating the jury.	☐	☐	☐	☐	☐	☒

Additional Comments: Great job by Dr. Guale. The jury found her testimony very credible and compelling.

Evaluated by: Stephany Urrea Date of evaluation: 1/16/2015

Review and feedback by Manager: 1/26/15

Manager's signature: _____ Witness's signature: F-Guale Date: 1/26/15

Quality Assurance Review: Cynthia Young Date of Review: 1/26/15

Harris County Institute of Forensic Sciences
COURT TESTIMONY EVALUATION

Witness name: Dr. Fessessework Guale

Date of testimony: 02/02/~~14~~15 incorrect year JL 02/04/15 Lab Case No.: 14-09330

Called as witness for: Prosecution ☒ Defense ☐

Evaluation Method: Direct Observation ☒; Telephone Interview ☐

If telephone: Attorney's name: JAMES MURPHY Phone No.: 713-755-0236
(For telephone interviews contact the attorney who subpoenaed the witness for court.)

	Rating Scale	Outstanding	Good	Acceptable	Needs Improvement	Unacceptable	Not Applicable
1	The witness was prepared for court.	☒	☐	☐	☐	☐	☐
2	The witness did not have to refer to the case file excessively to answer the questions.	☒	☐	☐	☐	☐	☐
3	The witness' appearance was suitable for court. (Professional business attire)	☒	☐	☐	☐	☐	☐
4	The witness spoke clearly and distinctly.	☒	☐	☐	☐	☐	☐
5	The witness answered questions without volunteering any unnecessary information.	☒	☐	☐	☐	☐	☐
6	The witness answered questions directly and objectively for the prosecution.	☒	☐	☐	☐	☐	☐
7	The witness answered questions directly and objectively for the defense.	☒	☐	☐	☐	☐	☐
8	The witness' overall demeanor was professional.	☒	☐	☐	☐	☐	☐
9	The witness exhibited appropriate knowledge of his/her technical subject.	☒	☐	☐	☐	☐	☐
10	The witness testified within limits of the report.	☒	☐	☐	☐	☐	☐
11	The witness explained technical procedures with terminology the jury could understand.	☒	☐	☐	☐	☐	☐
12	The witness maintained composure under cross-examination.	☒	☐	☐	☐	☐	☐
13	If visual aids were utilized, they were professional in appearance and an effective means of educating the jury.	☐	☐	☐	☐	☐	☒

Additional Comments: Dr. Guale was an outstanding professional who was extemely knowledgeable about the subject matter. She presented with integrity, polish, and poise.

Evaluated by: JAMES MURPHY Date of evaluation: 2/4/15

Review and feedback by Manager: Fantastic evaluation

Manager's signature: [signature] 2/4/15 Witness's signature: F. Guale Date: 2/4/15

Quality Assurance Review: Cynthia Young Date of Review: 2/4/15

Harris County Institute of Forensic Sciences
COURT TESTIMONY EVALUATION

Witness name: Dr. Guale

Date of testimony: 02/11/15 Lab Case No.: IFS13-06854

Called as witness for: Prosecution ☒ Defense ☐

Evaluation Method: Direct Observation ☒; Telephone Interview ☐

If telephone: Attorney's name: Phone No.:
(For telephone interviews contact the attorney who subpoenaed the witness for court.)

	Rating Scale	Outstanding	Good	Acceptable	Needs Improvement	Unacceptable	Not Applicable
1	The witness was prepared for court.	☐	☒	☐	☐	☐	☐
2	The witness did not have to refer to the case file excessively to answer the questions.	☐	☒	☐	☐	☐	☐
3	The witness' appearance was suitable for court. (Professional business attire)	☒	☐	☐	☐	☐	☐
4	The witness spoke clearly and distinctly.	☐	☒	☐	☐	☐	☐
5	The witness answered questions without volunteering any unnecessary information.	☐	☒	☐	☐	☐	☐
6	The witness answered questions directly and objectively for the prosecution.	☒	☐	☐	☐	☐	☐
7	The witness answered questions directly and objectively for the defense.	☐	☐	☒	☐	☐	☐
8	The witness' overall demeanor was professional.	☐	☒	☐	☐	☐	☐
9	The witness exhibited appropriate knowledge of his/her technical subject.	☒	☐	☐	☐	☐	☐
10	The witness testified within limits of the report.	☒	☐	☐	☐	☐	☐
11	The witness explained technical procedures with terminology the jury could understand.	☒	☐	☐	☐	☐	☐
12	The witness maintained composure under cross-examination.	☐	☒	☐	☐	☐	☐
13	If visual aids were utilized, they were professional in appearance and an effective means of educating the jury.	☐	☐	☐	☐	☐	☐

Additional Comments: Dr. Guale states that there was significant questioning by Defense regarding a publication linking Candida albicans with ASCVD production under certain circumstances. She states she answered factually, but the outcome of the trial was a hung jury.

Evaluated by: Casey Goodman Date of evaluation: 02/12/15
Review and feedback by Manager: ↑

Manager's signature: 2/16/15 Witness's signature: F-Guale Date: 2/16/15

Quality Assurance Review: Cynthia Young Date of Review: 3/5/15

Harris County Institute of Forensic Sciences
COURT TESTIMONY EVALUATION

Witness name: Dr. Fessesswork Guale

Date of testimony: June 10, 2015 Lab Case No.: IFS14-11329

Called as witness for: Prosecution ☒ Defense ☐

Evaluation Method: Direct Observation ☒; Telephone Interview ☐

If telephone: Attorney's name: Phone No.:
(For telephone interviews contact the attorney who subpoenaed the witness for court.)

	Rating Scale	Outstanding	Good	Acceptable	Needs Improvement	Unacceptable	Not Applicable
1	The witness was prepared for court.	☒	☐	☐	☐	☐	☐
2	The witness did not have to refer to the case file excessively to answer the questions.	☒	☐	☐	☐	☐	☐
3	The witness' appearance was suitable for court. (Professional business attire)	☒	☐	☐	☐	☐	☐
4	The witness spoke clearly and distinctly.	☒	☐	☐	☐	☐	☐
5	The witness answered questions without volunteering any unnecessary information.	☒	☐	☐	☐	☐	☐
6	The witness answered questions directly and objectively for the prosecution.	☒	☐	☐	☐	☐	☐
7	The witness answered questions directly and objectively for the defense.	☐	☒	☐	☐	☐	☐
8	The witness' overall demeanor was professional.	☒	☐	☐	☐	☐	☐
9	The witness exhibited appropriate knowledge of his/her technical subject.	☒	☐	☐	☐	☐	☐
10	The witness testified within limits of the report.	☒	☐	☐	☐	☐	☐
11	The witness explained technical procedures with terminology the jury could understand.	☒	☐	☐	☐	☐	☐
12	The witness maintained composure under cross-examination.	☐	☒	☐	☐	☐	☐
13	If visual aids were utilized, they were professional in appearance and an effective means of educating the jury.	☐	☐	☐	☐	☐	☒

Additional Comments:
Dr. Guale did an amazing job with her testimony. During cross-examination by defense counsel, however, you could tell that she was getting somewhat agitated by wording of questions. Dr. Guale remained composed, but did seem somewhat defensive during a couple of hypothetical questions.

Evaluated by: Twyanette Wallace Very good, however, Date of evaluation: June 23, 2015
Review and feedback by Manager: Be mindful to not lose composure under cross-examination, even with repetitive or hypothetical questions.
Manager's signature: 2/5/16 Witness's signature: F Guale Date: 2/8/16

Harris County Institute of Forensic Sciences

COURT TESTIMONY EVALUATION

Quality Assurance Review: Cynthia Young Date of Review: 2/8/16

Luis A. Sanchez, M.D.
Chief Medical Examiner

Main: (713) 796-9292
Fax: (713) 796-6844

Harris County Institute of Forensic Sciences

Date: 8/26/16

To: Dr. Fessessework Guale
Analytical Operations Manager

From: Dr. Teresa Gray
Chief Toxicologist

Re: Performance Improvement Plan – Testimony-Related

Situation

1. Recently, concerns of unclear testimony have been raised by members of the court and brought to our attention. As follow up to these concerns, I directly observed your recent testimonies and noted subtle inaccuracies, contradictions and unclear explanations, themes that were discussed during your recent performance feedback

Concern

As a representative of the Harris County Institute of Forensic Sciences, you must effectively and professionally communicate with pathologists, attorneys and law enforcement officers, providing nuanced opinions and clear and accurate explanations. Failure to consistently perform at this caliber is unacceptable. Immediate and sustained improvement is required through active participation in this performance improvement plan.

Refusal to participate in the performance improvement plan and demonstrate sustained improvement may result in disciplinary action, up to and including termination.

Performance Improvement Plan

1. Employee Action
   - You will not be permitted to provide expert testimony until further notice. Your assigned responsibilities will be adjusted accordingly. The following areas must be improved:
     - Your communication, including testimony, must be clear to the intended audience. Confusion or misunderstanding must be minimal. You must consider the knowledge level of the target audience and adjust your terminology and approach accordingly.
     - Communication, including testimony, must be precise and accurate.
     - Your communication, including testimony, must be more nuanced. "All or none" positions should be avoided when possible.

- Communication, including testimony, should be concise when possible and directly relate to the question asked. If you do not understand the question asked, you must seek clarification before answering.
- Communication with laboratory staff and customers must be professional and respectful.

- To facilitate this improvement, you must participate in any public speaking exercise deemed necessary by me or laboratory management. At a minimum, your public speaking exercises shall include:
  - Stage 1: General public speaking (non-linear thinking)
    - You shall give a 5 minute presentation on a topic of your choice, preferably non-scientific.
    - Depending on your performance of the first attempt, a second training session may be recommended.
  - Stage 2: General public speaking (planned linear thinking)
    - You shall give a 5 minute presentation on a non-scientific topic of your choice that is procedural (i.e. how to tie shoes, how to bake cookies)
    - The setting shall be informal.
    - Depending on your performance of the first attempt, a second training session may be recommended.
  - Stage 3: General public speaking (unplanned linear thinking)
    - You shall give a 5 minute presentation on a non-scientific topic that I choose. The topic will once again be procedural.
    - The setting shall be informal.
    - Depending on your performance of the first attempt, a second training session may be recommended.
  - Stage 4: Scientific Presentation
    - You shall present a lecture to me.
  - Stage 5: Voir dire practice
    - You shall practice voir dire questions that would be expected in a real case.
  - Stage 6: Mock trial practice (non-adversarial)
  - Stage 7: Mock trial (adversarial)
- You will attend the weekly case conference every other week. I will observe your interactions with pathologists and provide feedback after each conference.
- After resuming testimony, your testimony will be observed. You must notify me when you expect to go to court so that someone can go with you. You shall review your testimony with the observer when you return from court.

2. Manager Action
   - We shall discuss your public speaking exercises, testimony if applicable, and interactions with pathologists/staff as necessary. We will discuss which areas went well and formulate strategies to improve on weak areas.
   - After three months, I will re-evaluate your performance. If you have demonstrated sustained improvement, this plan will be concluded; otherwise, an alternative plan of action will be taken.

Signed by Employee: Fessessework Guale Date: 8/30/16
Dr. Fessessework Guale
Analytical Operations Manager

Prepared by Manager: Teresa Gray Date: 8/30/16
Dr. Teresa Gray
Chief Toxicologist

Witnessed by: Date: 8/30/16
Dr. Warren Samms
Director of Toxicology and Chemistry

TOX.16.03 Root Cause Analysis

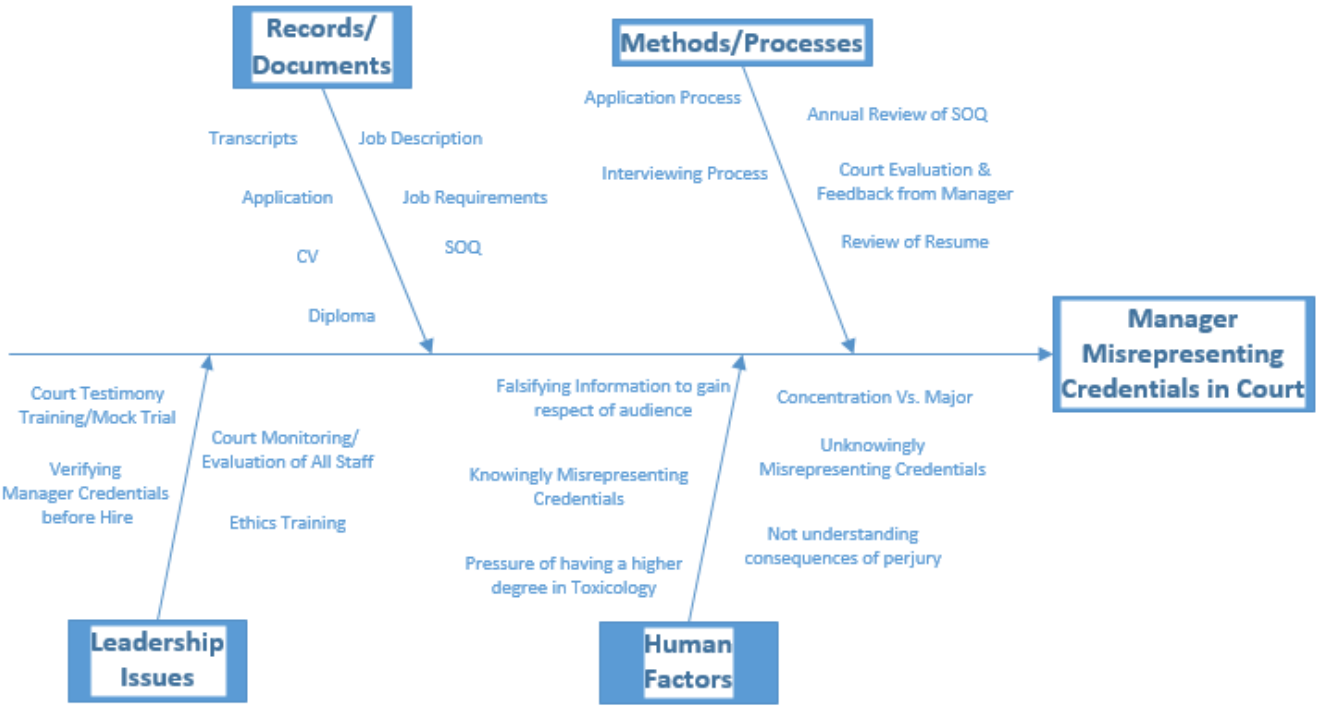
Define Event:

In late August 2016 it was discovered the Analytical Operations Manager (AOM) was misstating the title of her Master of Science degree during court testimony.

RCA Team- Quality Director, Quality Manager, QA/QC Project Coordinators, Director of Toxicology and Chemistry, and Chief Toxicologist.

Triggers- Unclear testimony regarding the nature of her degrees led to management review of provided documentation and past court transcripts, as well as direct observation of testimony.

Find Possible Causes:



See summary that overlaps Defining Event & Finding Potential Causes for CAR.

Find the Root Cause:

Records/Documents

Were all the records containing her credentials consistent with each other?

→ NO. The major stated on her **transcript** and **diploma** did not match what was written on her job **application, CV, or SOQ**.

Did she try to hide her true major by withholding documents?

→ NO. The diploma was in her Q-Pulse People file. If she submitted her diploma, she was not hiding her true major.

Did she misrepresent credentials in order to qualify for her position?

→ NO. She met the criteria of her initial and ultimate **job description** and was qualified to perform her **required duties.** There was no need for her to misrepresent credentials in order to gain employment or a promotion.

Methods/Processes

Were her credentials verified at the time of hiring?

→ UNKNOWN. The **application process** did not require official transcripts to be submitted by applicants in 2006.**(A)** **Interviews** varied; it was at the discretion of the hiring manager to verify credentials. Her hiring manager is no longer employed by the office.

Were her **CV** and **SOQ** checked for accuracy?

→ NO. Staff CVs are currently not checked. SOQs were often reviewed for format and consistency with duties by QA personnel; however, up until this point they were normally not checked against diplomas or transcripts.**(B)** A misstated degree would not have been caught unless someone compared the SOQ against the diploma or transcript.

Was there a lack of **court monitoring and evaluation**?

→ MAYBE. Toxicology staff, particularly managers, were historically evaluated by attorneys or other court parties, not crime lab personnel.**(C)** Earlier monitoring would have caught the misrepresentation on the stand only if the manager was aware of her degree as stated in her diploma.

Leadership Issues

Were opportunities missed early on to **verify her credentials** or **monitor her court testimony**?

→UNKNOWN. Again, it is unclear if her hiring manager verified her credentials or observed her testify in court. If her hiring manager was aware of the discrepancy between her application and SOQ and did not take action, then it is likely the hiring manager would not have acted if she heard her misstate her credentials on the stand.

Did the agency fail to provide **testimony training**?

→NO. Accreditation mandates training for staff in forensic science and criminal and civil law procedure. The AOM attended general forensic science knowledge and general court testimony training sessions throughout her career at IFS. Although the AOM had participated in a **mock trial** during her first year of employment, she did not complete a mock trial when the scope of her testimony changed. It remains unknown if a mock trial would have led to the issue being caught sooner.

Did the agency fail to provide **ethics training**?

→NO. Accreditation mandates ethics. training for laboratory personnel. The AOM had attended multiple ethics training sessions throughout her career at IFS.

Human Factors

Did she confuse the concepts of **course concentration** and **major**?

→NO. Neither the educational institution nor her transcript provided evidence that her program offered a toxicology concentration or toxicology emphasis. Nevertheless, the AOM felt strongly that her toxicology courses and toxicology research meant that her degree was "in toxicology."

Was there **pressure** from staff or agency management to possess a higher degree in "toxicology"?

→NO. The AOM possessed multiple post-graduate degrees. She was in a director-level position despite the fact that none of them contained the word "toxicology."

Was the misrepresentation of her credentials done so maliciously?

→NO. The AOM did not have a history of falsifying results or records. She was **not known to intentionally misrepresent** facts.

Did the AOM wish to curtail the process of being qualified as an expert in toxicology?

→YES. She was uncomfortable with the adversarial nature of the courtroom. When attorneys **qualify an expert witness** for the jury, a series of questions are asked about the witness's education, training, and experience. The more relevant one's education, training, and experience is to their field of expertise, the faster the attorney can qualify the witness. Irrelevant degrees may prompt additional questions from an attorney.

Did she understand the consequences her actions would have on the cases and her career?

→NO. The AOM considered the conflation of her true degree as innocuous, and that others would find it innocuous, as well. The associated consequences, up to and including **perjury**, were not on her radar, and therefore, they were not a deterrent. Even when confronted with her wrongdoing, she did not fully appreciate the consequences her actions had within the criminal justice system.

See summary for solutions and action (Corrective Action & Preventative Action)

Preventative changes that were already implemented after the AOM was hired:

(A) Currently, lab policy mandates official transcripts and/or diplomas to be checked before hiring.

Preventative changes that were implemented after the incident:

(B) Lab policy has been changed to require records to be submitted with every SOQ and CV revision.
(C) Re-emphasized existing IFS testimony monitoring policy to stress the importance of managers receiving direct testimony observation by IFS personnel.

Measure and Assess:

1) Further ethics discussions with the staff showed all understood the severity and ramifications of misrepresenting credentials.
2) SOQ reviews showed the need to request supporting records from current staff. All SOQs and CVs have been updated with supporting records.
3) Closed RCA October 21, 2016

RECORD OF TRAINING
MODULE XVI: COURTROOM TESTIMONY

Employee name: Fessessework Gwale

Procedure	Training Method	Trainee	Trainer	Date of Training
Courtroom attendance: Vehicles and Parking				9/18/13
Courtroom Attendance: Observation				
Mock Trial	O, P	FG	/	12/12/06
In-house trainings	O	FG	LAN	9/20/12 (2)
Live or Internet presentations	O	FG	RTI	1/13/12, 1/26/12, 9/27/13

TRAINING AGREEMENT

EMPLOYEE: Fessessework Gwale DATE: 9/19/13

EMPLOYEE STATUS:
- ☐ New Hire
- ☐ New/Revised Procedure
- ☐ Retraining for Remedial Purposes
- ☐ Verification of Employees Performance

TRAINER: LAN Vichell DATE: 09/2013

COMMENTS:

The employee can perform the indicated procedures with minimal supervision.

ASSESSMENT COMPLETED BY: Ashlyn Beard DATE: 9/20/13

PERFORMANCE ASSESSMENT METHOD:
- ☐ Competency Test
- ☐ Proficiency Test
- ☐ Oral Exam

evaluations

MANAGER: _____ DATE: 9/20/13

*TRAINING METHOD:

R = Read Procedural Steps
O = Observe demonstration
P = Perform with Supervision
PM = Perform without Supervision

Certificate of Attendance

is hereby granted to

FESSESSEWORK GUALE

To certify attendance at the training class:

"Ethics Training"

a 2.0 hour class held on December 9, 2009

Human Resources & Risk Management

HARRIS COUNTY 1836 TEXAS

Debbie S. Chapman, PHR

Training Administrator

Certificate of Completion

This certifies that

Fessessework Guale

Completed the

Jon S. Byrd, M.S.

Confirmation Bias, Ethics, and Mistakes in Forensics

Forensic Ethics Seminar

May 12, 2010

Sponsored by the

Harris County Institute of Forensic Sciences

Ashraf Mozayani, Ph.D., D-ABFT
Crime Laboratory Director

Luis A. Sanchez, M.D.
Chief Medical Examiner

Fessessework Guale

Has attended and met the requirements of the on-line course:

Expert Testimony for the Prosecutor and Scientist

On

1/13/2012

This course was provided with funding from National Institute of Justice

This course provided one contact hour

Certificate Number: 1096941996
For further information: www.rti.org/forensiced

Fessessework Guale

Has attended and met the requirements of the on-line course:

Expert Testimony for the Prosecutor and Scientist II

On

1/26/2012

This course was provided with funding from National Institute of Justice

This course provided one contact hour

Certificate Number: 1097341629
For further information: www.rti.org/forensiced

Luis A. Sanchez, M.D.
Chief Medical Examiner

Main: (713) 796-9292
Fax: (713) 796-6844

Harris County Institute of Forensic Sciences

Expert Testimony Training – Logistics
MEETING TITLE

9/20/12	1st floor classroom	1:30 pm – 2:00 pm
DATE	LOCATION	TIME

	NAME (Typed or Printed)	SIGNATURE
1	Dr. Ashraf Mozayani	
2	Andre Salazar	
3	Dr. Anna Kelly	
4	Ashlyn Beard	
5	Dr. Charlotte Baker	
6	Collin Clay	
7	Crystal Arndt	
8	Dana Mike	
9	DeShaun Alexander	
10	Dr. Fessessework Guale	
11	Fredria Shaw	
12	Fu Tian	
13	Glenna Thomas	
14	Dr. Hsin-Hung Chen	
15	Jameaker Dumas	
16	James Sailors	
17	Dr. Jeff Walterscheid	
18	Josie Hollowell	
19	Linda Alvarado	
20	Linda Nickell	

	NAME (Typed or Printed)	SIGNATURE
21	Meagan Ocanas	Meag Ocañas
22	Paola Velasco	
23	Patti Small	Patti Small
24	Dr. Samuel Wyllie	
25	Angela Mwadime	
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Luis A. Sanchez, M.D.
Chief Medical Examiner

Main: (713) 796-9292
Fax: (713) 796-6844

Harris County Institute of Forensic Sciences

Expert Testimony Training – Analogies
MEETING TITLE

9/20/12	1st floor classroom	2:00 pm – 2:30 pm
DATE	LOCATION	TIME

	NAME (Typed or Printed)	SIGNATURE
1	Dr. Ashraf Mozayani	
2	Andre Salazar	
3	Dr. Anna Kelly	
4	Ashlyn Beard	Ashlyn Beard
5	Dr. Charlotte Baker	Charlotte Baker
6	Collin Clay	Collin Clay
7	Crystal Arndt	Crystal Arndt
8	Dana Mike	
9	DeShaun Alexander	
10	Dr. Fessessework Guale	F-Guale
11	Fredria Shaw	
12	Fu Tian	
13	Glenna Thomas	Glenna Thomas
14	Dr. Hsin-Hung Chen	
15	Jameaker Dumas	Jameaker Dumas
16	James Sailors	
17	Dr. Jeff Walterscheid	
18	Josie Hollowell	Josie Hollowell
19	Linda Alvarado	Linda Alvarado
20	Linda Nickell	

	NAME (Typed or Printed)	SIGNATURE
21	Meagan Ocanas	Meagan Ocañas
22	Paola Velasco	
23	Patti Small	
24	Dr. Samuel Wyllie	
25	Angela Mwadime	
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AGENDA – General Knowledge of Forensic Science

Wednesday, August 21, 2013

- **8:30am – Introduction (Ms. Pierce)**
- **9:00am – Drug Chemistry (Ms. McClain)**

- **BREAK**

- **9:45am – Toxicology (Dr. Waltersheid)**
- **10:15am – Firearms (Mr. Baldwin)**

- **BREAK**

- **11:00am – Trace (Dr. Davis)**
- **11:30am- Serology/DNA (Ms. Freeman)**

Luis A. Sanchez, M.D.
Chief Medical Examiner

Main: (713) 796-9292
Fax: (713) 796-6844

Harris County Institute of Forensic Sciences

	Crime Laboratory Staff – Mandatory Meeting General Forensic Science Training 1st Floor Classroom 8:30 am – 11:30 am	
	Lab Personnel	**Signature**
1.	Aguilar de Alba, Ana Karina	
2.	Alexander, DeShaun	
3.	Alvarado, Linda	
4.	Arndt, Crystal	
5.	Baker, Charlotte	
6.	Baldwin, Robert	
7.	Beard, Ashlyn	
8.	Binder, LaToya	
9.	Bruns, Bradley	
10.	Cao, Tuan	
11.	Cavalier, Dimika	
12.	Chen, Michael	
13.	Clay, Collin	
14.	Crandell, Katelyn	
15.	Davis, William	
16.	Disiere, Brittany	
17.	Dumas, Jameaker	
18.	Dupre, Jill	
19.	Ellis, Michelle	
20.	Gaswint, Jason	
21.	Guale, Fessessework	
22.	Hohler, Melinda K. Wilson	
23.	Hollowell, Josie	
	Faulkner, Anthony	

	Crime Laboratory Staff – Mandatory Meeting General Forensic Science Training 1st Floor Classroom 8:30 am – 11:30 am	
	Lab Personnel	**Signature**
24.	Jiang, Julia	
25.	Kelly, Anna	
26.	LaPorte, Dawn	
27.	Lenoir, Melissa	
28.	McClain, Kay	
29.	Mike, Dana	
30.	Mwadime, Angela R.	
31.	Ng, Diana	
32.	Nguyen, Khanh	
33.	Nickell, Linda	
34.	Ocanas, Meagan	
35.	Pierce, Michal	
36.	Reach, Shrey	
37.	Rizvi, Shaheen	
38.	Sailors, James	
39.	Salazar, Andre	
40.	Samms, Warren	
41.	Santillan, Abel	
42.	Schroeder, Jason L.	
43.	Shahreza, Shahriar	
44.	Shaw, Fredria	
45.	Small, Patricia	
46.	Theodore, Richele	
47.	Thomas, Glenna	

	Crime Laboratory Staff – Mandatory Meeting General Forensic Science Training 1st Floor Classroom 8:30 am – 11:30 am	
	Lab Personnel	**Signature**
48.	Tian, Fu	
49.	Turner, Jennifer	
50.	Vajdos, Scott	
51.	Vircks, Kyle Edward	
52.	Waiters, Kacie	
53.	Walterscheid, Jeffrey	
54.	White, Thomas	
55.	Williams, Donna	
56.	Williams, Sharonda	
57.	Young, Cynthia	
58.	Lyons, Tammy	
59.	Muhlhauser, Carey	
60.	Jesse Zavala	
61.	Kay McClain	
62.	Stevie Wolfe	
63.	Autumn Massiello	
64.	ROBIN FREEMAN	
65.		
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Fessessework Guale

Has attended and met the requirements of the on-line course:

Answering the NAS: The Ethics of Leadership and the Leadership of Ethics

On

09/4/2013

This course was provided with funding from National Institute of Justice

This course provided one contact hour

Certificate Number: 1131887473
For further information: www.rti.org/forensiced

Certificate of Completion

This certifies that

FESSESSEWORK GUALE

Has Participated in

"Expert Witness Testimony Workshop"

Presented at the Harris County Institute of Forensic Sciences

November 7 & 8, 2013

Luis A. Sanchez, M.D.
Chief Medical Examiner

CERTIFICATE OF ATTENDANCE

THIS CERTIFIES THAT

Fessessework Guale

has successfully completed the required 1.5 hour

ETHICS WORKSHOP

Given this 20th day of May, 2014

Michal Pierce, M.S.
Quality Director

INSTITUTE OF FORENSIC SCIENCES
HARRIS COUNTY

Roger Kahn, Ph.D.
Crime Laboratory Director

CERTIFICATE of COMPLETION

Is hereby awarded to

DR. FESSESSEWORK GUALE

for completing the

GENERAL KNOWLEDGE OF FORENSIC SCIENCE TRAINING

A 1.0 hour training session was completed on Thursday, April 2, 2015.

Presented by
Quality Management/Training Development

Michal Pierce

Michal L. Pierce, MS, F-ABC
Quality Director
Harris County, Texas

HARRIS COUNTY
INSTITUTE OF FORENSIC SCIENCES
SCIENCE. SERVICE. INTEGRITY.

The Harris County Institute of Forensic Sciences is accredited by the National Association of Medical Examiners, American Society of Crime Laboratory Directors/Laboratory Accreditation Board-*International,* American Board of Forensic Toxicology, Texas Department of Public Safety, Accreditation Council for Graduate Medical Education, and the Texas Medical Association for the Accreditation Council for Continuing Medical Education.

CERTIFICATE OF ATTENDANCE

THIS CERTIFIES THAT

Fessessework Guale

has successfully completed the required 1.5 hour

ETHICS WORKSHOP

Given this 17th day of August, 2015

Michal Pierce, M.S.
Quality Director

INSTITUTE OF FORENSIC SCIENCES
HARRIS COUNTY

Roger Kahn, Ph.D.
Crime Laboratory Director

Corrective and Preventive Actions Report

Printed on: Tuesday, December 27, 2016

Details

Number	Status	Owner	Raised Date
TOX16.03	Closed	Gray, Teresa	8/26/2016

Source	Standard	Target Date
Crime Laboratory\Forensic Toxicology		

Raised By Person	Severity	Raised Against (Department or Supplier)
Samms, Warren	Level I	Crime Laboratory Services\Toxicology

Define Problem

Target Date	Owner	Closed Date	Closed By
	Pierce, Michal	9/8/2016	Pierce, Michal

Details

The Toxicology Analytical Operations Manager (AOM) had difficulty explaining her qualifications on the witness stand during a routine line of questioning resulting in an Assistant District Attorney (ADA) expressing concern over her testimony performance. While reviewing the court testimony with the ADA afterward, it was discovered the AOM was misstating the title of her Master of Science degree.The AOM's behavior on the stand appeared to deviate from two established codes of ethics:-The ASCLD/LAB Guiding Principles of Professional Responsibility for Crime Laboratories and Forensic Sciences requires that a forensic expert "accurately represent their education, training, experience, and area of expertise." -The American Board of Forensic Toxicology expects all certificate holders to follow the ABFT Code of Ethics, among which is the requirement to "Perform all professional activities in Forensic Toxicology with honesty and integrity, and refrain from any knowing misrepresentation of their professional qualifications, knowledge and competence, evidence and results of examinations, or other material facts."

Investigate-Root Cause Analysis

Target Date	Owner	Closed Date	Closed By
	Gray, Teresa	9/29/2016	Pierce, Michal

Details

The Assistant District Attorney was interviewed about the expert witness testimony, as a testimony transcript (which was requested) was not immediately available. Specifically, the employee stated on the stand that she did not receive education or training regarding the effects of alcohol on humans. The employee was then counselled about the feedback obtained, and stated that she interpreted the question as being only within the confines of her formal education, not any subsequent work experience, training, or continuing education. The Chief Toxicologist accompanied the employee to her next court appearances in order to directly observe her testify. Several deficiencies were noted by the Chief Toxicologist. A subsequent review of her credentials revealed that her Master of Science degree was not in "Toxicology", as stated in past court transcripts; rather, it was in "Physiological Science". Furthermore, she stated her degree was in Toxicology on her SOQ, curriculum vitae, and employment application. When the employee was asked about the apparent discrepancy in her testimony about credentials, she stated that she always considered her degree to be "in Toxicology" due to the nature of her coursework and research, despite the fact that her degree and transcript stated otherwise. Accordingly, the root cause was determined to be that the employee felt that the term "Toxicology" better described her course of study, and did not believe that she was misrepresenting her credentials. Further, she failed to recognize the ramifications this discrepancy would have on her professional integrity and within the criminal justice system.

Determine Action

Target Date	Owner	Closed Date	Closed By
	Gray, Teresa	9/29/2016	Gray, Teresa

Details

Re-train the employee to communicate her credentials and professional opinions in the most clear and accurate manner possible while on the witness stand.

Corrective Action

Target Date	Owner	Closed Date	Closed By
	Gray, Teresa	10/10/2016	Gray, Teresa

Details

-A performance improvement plan (attached) was developed to re-train the employee in expert testimony, with an emphasis in clarity of communication.-The discovery about the misstated degree was disclosed to the Harris County District Attorney's Office. A list of potentially affected cases was generated and submitted to the attorneys.-All three accreditation bodies were notified of the nonconformance.

Actions

Number	Owner	Target Date	Completed Date
Details		**Response**	
1	Gray, Teresa	11/30/2016	10/10/2016
Performance Improvement Plan was developed, presented, and signed by the employee on 8/30/16.		Employee resigned on 9/21/16, before completing the P.I.P.	
2	Pierce, Michal	9/6/2016	9/6/2016
The Crime Laboratory Director and Quality Director met with the Belinda Hill, Allison Baimbridge, Terrence Wyndham, and Inger Chandler from the HCDAO on 9/6/16 to discuss the discrepancies noted in the employee's testimony.		The HCDAO issued a notice to the defense bar that same day.	
3	Pierce, Michal	9/9/2016	9/9/2016
The Texas Forensic Science Commission, ASCLD/LAB, and ABFT were notified of the nonconformance via email/electronic submission.		All acknowledged receipt of the disclosure.	

Preventive Action

Target Date	Owner	Closed Date	Closed By
	Pierce, Michal	10/11/2016	Pierce, Michal

Details

-All SOQs and curricula vitae of crime laboratory employees will be reviewed for consistency with their submitted diplomas and academic transcripts. Supporting documentation for claims will be requested, if not already on file with HCIFS.-Honesty about education and qualification in area of expertise is being reiterated in ethics training sessions.-Court transcripts were reviewed by management and incidents of note will be incorporated into future testimony training sessions.

Rev/App By: Manager/Director

Target Date	Owner	Closed Date	Closed By
9/29/2016	Samms, Warren	10/12/2016	Samms, Warren

Details

I acknowledge I have reviewed this summary and approve.

Rev/App By: Crime Lab Director

Target Date	Owner	Closed Date	Closed By
10/10/2016	Kahn, Roger	10/17/2016	Kahn, Roger

Details

I acknowledge I have reviewed this summary and approve.

Rev/App By: Quality Mgr

Target Date	Owner	Closed Date	Closed By
10/11/2016	Young, Cynthia	10/17/2016	Young, Cynthia

Details

I acknowledge I have reviewed this summary and approve.

Closure by Quality Director

Target Date	Owner	Closed Date	Closed By
	Pierce, Michal	10/21/2016	Pierce, Michal

Details

Employee submitted a letter of resignation the week of September 19th, before completing the performance improvement plan. Ethics and testimony training for the rest of staff will continue as planned.

Curriculum Vitae

Fessessework Guale. DVM, MS, D-ABVT, D-ABFT-FT
Harris County Institute of Forensic Sciences
1885 Old Spanish Trail
Houston, TX 77054
Phone: 713-796-6908
Fax: 713-796-6838
Fessessework.guale@ifs.hctx.net

Education

1993-1996: Oklahoma State University, Stillwater, OK

- **MS**: Toxicology, Physiological Sciences, College of Veterinary Medicine
- **Thesis**: Evaluation of Chick Embryo Motoneurone Cultures for the Study of Neurotoxicity. Published in 1997.

1985-1990: Addis Ababa University, Ethiopia

- **DVM**: College of Veterinary Medicine
- **Thesis**: Prevalence of Coccidiosis and Identification of *Eimeria* Species

1981-1983: Addis Ababa University, Ethiopia

- **BS**: Animal Science, College of Agriculture

Professional Experience

May 2013-present: Toxicology Analytical Operations Manager: Harris County Institute of Forensic Sciences

- Manage the daily operation of the Laboratory
- Perform technical, administrative and expert review of completed cases
- Provide consultations and toxicological interpretations to pathologists and law enforcement personnel
- Provide expert testimony in court
- Oversee the QA/QC operation of the laboratory
- Oversee the training and continuing education of staff members
- Hire subordinate staff
- Prepare annual budget for the laboratory
- Perform yearly performance evaluation of toxicology laboratory employees
- Prepare and present scientific articles

May 2011-May 2013: Assistant Chief Toxicologist: Harris County Institute of Forensic Sciences, Forensic Toxicology Section.

- Manage the daily operation of the toxicology laboratory
- Perform technical, administrative and expert review of completed cases
- Provide consultations and toxicological interpretations to pathologists and law enforcement personnel
- Provide expert testimony in court
- Plan and execute method development projects
- Prepare and present scientific articles
- Oversee the QA/QC operation of the laboratory
- Oversee the training and continuing education of staff members
- Hire subordinate staff
- Prepare annual budget for the laboratory
- Perform yearly performance evaluation of toxicology laboratory employees
- Prepare and present scientific articles

June 2008- May 2011: Toxicologist I: Harris County Institute of Forensic Sciences, Forensic Toxicology Section

- Manage and plan the daily operation of the toxicology laboratory
- Technical and administrative review completed cases
- Maintain laboratory compliance with quality control and quality assurance and accreditation by ABFT and ASCLAD/LAB.
- Provide expert witness in the court of law

June 2006- June 2008: **Toxicologist II Specialist**: Harris County Medical Examiners Office, Forensic Toxicology Section.

- **GC/MS Section Team Leader**: Provide leadership in all the activities of the section
- Technically review analytical data in the section
- Perform technical review and administrative review of completed cases
- Facilitate the completion of cases in a timely manner
- Responsible for troubleshooting instrument malfunctions and contact service technicians when necessary
- Review standard operating procedures, make necessary adjustments and/or changes to improve the efficiency of the analytical methods
- Assign team members daily duties
- Responsible for training and continuing education of team members
- Manages personnel issues in the section, including time sheets, time off requests, schedules, etc.
- Conduct the performance evaluation of team members

2000-2006: **Professional Research Associate/ Toxicologist**. Colorado State University Health Sciences Center, Forensic Toxicology Laboratory

- **Laboratory Manager**: Manage the day to day activity of the Forensic Toxicology laboratory
- Responsible for maintaining the laboratory's accreditation
- Organize the basic research activity in the laboratory
- Responsible for employee training and counseling
- Develop and validate new analytical methods
- Analyze, review and report analytical data
- Consult with law enforcement agencies, pathologists, and veterinarians on toxicology issues
- Provide expert testimony

1991-2000; Analytical Toxicologist: Oklahoma Animal Disease Diagnostic Laboratory, Oklahoma State University

- Analyze biological and environmental samples for drugs, pesticides, heavy metals, mycotoxins, feed additives, petroleum hydrocarbons, water pollutants and etc.
- Used, GC/MS, GC-FID, HPLC, AA, TLC, ELISA and bench chemistry
- Write and review standard operation procedures
- Analyze data, interpret and report results
- Consult with veterinarians and provide diagnostic service
- Perform research to improve and develop analytical methods
- Provide training to residents in analytical toxicology

Awards and Certificates

2007-**Diplomate: American Board of Forensic Toxicology**
1999-**Diplomate: American Board of Veterinary Toxicology**
1990-**Academic Excellence Award;** College of Veterinary Medicine
1981-**Academic Excellence Award**, College of Agriculture

Publications

Fessessework Guale, Shahriar Shahreza, Jeffrey P. Walterscheid, Hsin-Hung Chen, Crystal Arndt, Anna T. Kelly and Ashraf Mozayani: **Validation of LC-TOF-MS screening for drugs, metabolites and collateral compounds in Forensic Toxicology specimens.** Journal of Analytical Toxicology, Vol. 37. No. 1, 2013 pages 17-25.

K. Bischoff, F. Guale; **Australian Tea Tree (*Melaleuca alternifolia*) oil poisoning in three purebred cats**. Journal of Veterinary Diagnostic Investigations, Volume 10, 1998 pages 208-210

Fessessework G. Guale, George E. Burrows: **Evaluation of Chick Embryo Motoneuron Cultures for the Study of Neurotoxicity**. Natural Toxins, Volume 5, Number 3, 1997, pages 115-120

FG. Guale, EL. Stairs, WB. Johnson, WC. Edwards, JC. Haliburton: **Laboratory Diagnosis of Zinc Phosphide Poisoning**. Veterinary and Human Toxicology, Volume 36, No. 6, December 1994, pages 517-519

Fessessework Guale, **Assessment of Rectal Temperature, Pulse, and Respiratory rates in Healthy Pack Donkeys**. Student Scientific Journal, April 1989, College of Veterinary Medicine, Addis Ababa University, Ethiopia

Presentations

- **Applications of Fast GC-MS in the analysis of Opiates**. Poster presented on October 19, 2007 at Society of Forensic Toxicology Continuing Education Workshop, Raleigh-Durham, NC.
- **Clinical or Forensic Case-A Crossroad for Interpretation**: Presented to Toxicology staff, at the Harris County Medical Examiners Office, October 2007, Houston, TX
- **Pharmacokinetics and Interpretation of Cocaine**: Presented to Fellows and Pathology Residents of the Harris County Medical Examiners Office, September 2007, Houston, TX
- **Interpretive DUID**: Presented to Toxicology staff at Harris County Medical Examiners Office, June 2008, Houston, TX
- **Pharmacokinetics and Interpretation of Cocaine**: Presented to Fellows and pathology residents of the Harris County Medical Examiners Office, October 2008, Houston, TX
- **Interpretive DUID Workshop**: Workshop Coordinator, SOFT/AAFS Drugs and Driving Committee Seminar, May 12-13, 2009, Houston, Texas.
- **Pharmacokinetics and Interpretation of Cocaine**: Presented to Fellows and Pathology Residents of the Harris County Medical Examiners Office, December 2009, Houston, TX
- **Phencyclidine (PCP) in fatally injured drivers and DUID arrests in Harris County, Texas.** Presented at the American Academy of Forensic Sciences, annual scientific meeting, February 24, 2010, Seattle, WA.

- **Pharmacokinetics and Interpretation of Cocaine**: Presented to Fellows and Pathology Residents of the Harris County Medical Examiners Office, November 2010, Houston, TX
- **Drug Testing and Interpretation in Postmortem Toxicology:** Presented at Harris County Institute of Forensic Sciences: Topics in Forensic Sciences Conference, April 15, 2011, Houston, TX.
- **Proof of concept for a comprehensive method for rapid drug screening of whole blood with UHPLC accurate-mass TOF LC/MS**. Presented at the SOFT-TIAFT joint meeting on September 25-30, 2011, San Francisco, CA
- **Pharmacokinetics and Interpretation of Cocaine**: Presented to Fellows and Pathology Residents of the Harris County Institute of Forensic Sciences, November 2011, Houston, TX
- **Toxicology result of drivers of fatal motor vehicle accidents in Harris County, TX, 2011**. Presented at the American Academy of Forensic Sciences annual meeting, February 22, 2013, Washington DC.
- **Recent Trends of Designer Drugs in Harris County Texas:** Presented at the American Academy of Forensic Sciences annual meeting. February 21, 2014**,** Seattle, WA
- **Diclazepam**: **Lorazepam in Disguise**. Presented at the American Academy of Forensic Sciences annual meeting, February 26, 2016, Las Vegas, NV.

ASCLD/LAB-*International*

STATEMENT OF QUALIFICATIONS

Name	Fessessework Guale	**Date**	12/31/15

Laboratory	Harris County Institute of Forensic Sciences

Job Title	Toxicology Analytical Operations Manager

Indicate all disciplines in which you do casework:

☐	**Drug Chemistry**	☒	**Toxicology**
☐	**Firearms/Toolmarks**	☐	**Biology**
☐	**Trace Evidence**	☐	**Questioned Documents**
☐	**Latent Prints**	☐	**Crime Scene**
☐	**Digital & Multimedia Evidence**		

List all category(ies) of testing in which you do casework:

Human Performance and Post-Mortem ForensicToxicology

Breath Alcohol Calibration Categories

☐	**Toxicology** - Breath Alcohol Measuring Instruments (The work of the laboratory MUST include calibration certificates- do not check the box if work is limited to breath/alcohol testing)
☐	**Toxicology** - Breath Alcohol Calibration Reference Material

Education: List all higher academic institutions attended (list high school only if no college degree has been attained)

Institution	Dates Attended	Major	Degree Completed
Oklahoma State University	1993-1996	Toxicology	MSc
Addid Ababa University	1985-1990	Veterinary Medicine	DVM
Addis Ababa University	1981-1983	Animal Science	Bsc

Other Training: List continuing education, workshops, in-service and other formal training received. Please include the course title, source and date of the training.

-SOFT: Society of Forensic Toxicologists Workshop, October 15-19, 2007, Raleigh, NC
-Interpretive DUID workshop: SOFT/AAFS Drug and Driving and Continuing Education Committee Seminar, May 6-8, 2008, West Palm Beach, FL
-Opioids and Pain Management: RTI training, on-line course, June 2008, Houston, TX
-Interpretive DUID workshop: SOFT/AAFS Drug and Driving and Continuing Education Committee Seminar, May 12-13, 2009, Houston TX
-Traffic Fatality Investigation Seminar, November 2009, Houston, TX
-ISO/IEC 17025 and Forensic Services Provider Accreditation Wotkshop: May 10-14 2010, Houston, TX
-Confirmation Bias, Ethics, and Mistake in Forensics: Forensic Ethics Seminar, May 12, 2010, Houston, TX
-Medicolegal death investigation Seminar, June 15, 2010
-Alcohol extrapolation and the use of BAC tracker Software, August 19, 2010
-Southwestern Association of Toxicologists, Fall 2010 meeting, September 16-18, 2010 Houston, TX
-Scientific sessions at the American Academy of Forensic Sciences, 62nd Annual scientific meeting, February 24-25, 2010 Seattle, WA
-Scientific sessions at SOFT-TIAFT conference, San Fransisco, CA, September 21-23, 2011

13. Scientific sessions at the annual AAFS conference, Washington, DC, February 22-23, 2013
14. Scientific sessions at the annual AAFS conference, Seattle, WA, February 20-21, 2014

Courtroom Experience: List the discipline/category(ies) of testing in which you have qualified to testify as an expert witness and indicate over what period of time and approximately how many times you have testified in each.

Toxicology/human performance: 2/2004, 1/2009, 1/2010, 1/2011, 6/2012, 2/2013, 2/2014, 14/2015

Professional Affiliations: List any professional organizations of which you are or have been a member. Indicate any offices or other positions held and the date(s) of these activities.

Southwestern Association of Toxicologists
American Academy of Forensic Sciences
California Association of Toxicologists
American Board of Veterinary Toxicology

Employment History: List all scientific or technical positions held, particularly those related to forensic science. List current position first. Be sure to indicate employer and give a brief summary of principal duties and tenure in each position.

Job Title	Toxicology Analytical Operations Manager	**Tenure**	present
Employer	HCIFS		
Provide a brief description of principal duties:			
Provide leadership in the analytical operations of the toxicology laboratory, Responsible for the day to day activity of analysts and the work flow of cases			

Job Title	Assistant Chief Toxicologist	**Tenure**	2 years
Employer	HCIFS		
Provide a brief description of principal duties:			
Assist the Chief Toxicologist in the management of the laboratory			

Job Title	Toxicologist I	**Tenure**	2 years
Employer	HCIFS		
Provide a brief description of principal duties:			
Supervise the GC/MS and LC/MS/MS sections of the toxicology laboratory			

Job Title	Toxicologist II Specialist	**Tenure**	2 years
Employer	HCIFS		
Provide a brief description of principal duties:			
GC/MS section team leader, perform data analysis, data review, technical and administrative review of cases			

Job Title	Forensic Toxicology Laboratory Manager/Research Associate	**Tenure**	5.7
Employer	University of Colorado Health Sciences Center		
Provide a brief description of principal duties:			
Assist the lead investigator in basic research, manage the day to day activity of the forensic toxicology laboratory			

Other Qualifications: List below any scientific publication and/or presentation you have authored or co-authored, research in which you are or have been involved, academic or other teaching positions you have held, and any other information which you consider relevant to your qualification as a forensic scientist.
(Use additional sheets if necessary.)

PRESENTATIONS:

-Recent Trends of Designer Drugs in Harris County, Texas: AAFS annual conference, Seattle, WA, February 17-22, 2014

-Toxicology Result of Drivers of Fatal Motor Vehicle Accidents in Harris County, Texas in 2011: AAFS Annual conference, washington, DC, February 22, 2013
- Proof of concept for a comprehensive method for rapid drug screening of whole blood with UHPLC Accurate-mass TOF LC/MS: SOFT-TIAFT confernce, San Fransisco, CA, September 23, 2011.
-Interpretation and Pharmacokinetics of Cocaine: Presented to Pathology Fellows of HCIFS. December 2010
-Phencyclidine (PCP) in Fataly Injured Drivers and DUID Arrests in Harris County, Texas : AAFS Annual Conference, Seattle, WA, February 24, 2010
- Interpretation and Pharmacokinetics of Cocaine: Presented to Pathology Fellows and Toxicology Staff of HCIFS, December 2009, Houston TX
-Interpretive DUID: Presented to Toxicology Staff of HCIFS, July 2008, Houston, TX
-Poster presentation on Fast opiate analysis by GC/MS: SOFT, Raleigh, NC, October 15-19, 2007.
-Clinical or Forensic Case: A Cross road to Interpretation: Presented to Toxicology Staff of HCIFS, November 2007, Houston, TX
- Prevalence of Drugs of Abuse from DUID cases in Denver Colorado, 2003-2005. Presented to Toxicology Staff on May 8, 2006 at HCIFS.

PUBLICATIONS:

1. Validation of LC-TOF-MS screening for drugs, metabolites and collateral compounds in Forensic Toxicology specimens: Journal of Analytica Toxicology, Volume 37, number 1, 2013, pages 17-24
2: Australian tea tree oil poisoning in three purebred cats. Journal of Veterinary Diagnostic Investigation. Volume 10, 1998, pages 208-210
3: Evaluation of Chick Embryo Motoneuron Cultures for the study of Neurotoxicity. Natural toxins, Volume 5, number 3, 1997 pages 115-120
4: Laboratory Diagnosis of Zinc Phosphide Poisoning. Veterinary and Human Toxicology. Volume 36, number 6, 1994, pages 517-519

CERTIFICATES:
1: Diplomate:American Board of Veterinary Toxicology
2: Diplomate: American Board of Forensic Toxicology: Forensic Toxicology Specialist

Oklahoma State University

Office of the Registrar
103 Whitehurst Hall
Stillwater, Oklahoma 74078-1013

DATE: 05-11-99 PAGE 1 OF 1

FESSESSEWORK G GUALE
18-2 N UNIVERSITY PL
STILLWATER OK 74075

ISSUED TO STUDENT

NAME: FESSESSEWORK G GUALE

STUDENT ID: 442-02-9149

BIRTHDATE: 07-11-63

********** DEGREES CONFERRED **********

05-04-96 MASTER OF SCIENCE
MAJOR: PHYSIOLOGICAL SCIENCE

********** COURSE INFORMATION **********

DEPT	NUMBER	TITLE	SEM HR	GRADE
	HR ATT	HR ERND	HR AVE	PT	GPA
		FALL SEMESTER 1992		
PHSI	6564	VET TOXICOLOGY	04	B
SEM	4	4	4	12.00	3.00
		SPRING SEMESTER 1993		
STAT	5013	STAT EXPERIMENTERS I	03	B
SEM	3	3	3	9.00	3.00
		FALL SEMESTER 1993		
PHSI	5110	PROBLEMS IN PHYSIOLOGY	01	A
PHSI	6200	TOPICS ADV PHARM & TOX	02	A
PHSI	6570	SEMINAR	01	A
SEM	4	4	4	16.00	4.00
		SPRING SEMESTER 1994		
PHSI	5224	CELL STRUCTURE & FUNC	04	B
SEM	4	4	4	12.00	3.00
		SUMMER SESSION 1994		
PHSI	5000	RESEARCH AND THESIS	03	X	A
SEM	3	3	3	12.00	4.00
		FALL SEMESTER 1994		
PHSI	6200	TOPICS ADV PHARM & TOX	04	A
SEM	4	4	4	16.00	4.00
		SPRING SEMESTER 1995		
PHSI	5000	RESEARCH AND THESIS	03	X	A
SEM	3	3	3	12.00	4.00
		FALL SEMESTER 1995		
PHSI	6570	SEMINAR	01	I	A
SEM	1	1	1	4.00	4.00
		SPRING SEMESTER 1996		
PHSI	5000	RESEARCH AND THESIS	02	A
SEM	2	2	2	8.00	4.00

ACCEPTED 4 CREDITS FROM ADDIS ABABA UNIVERSITY, ETHIOPIA TOWARD THE MASTER OF SCIENCE DEGREE.

********** CONTINUED ON NEXT COLUMN **********

DEPT	NUMBER	TITLE	SEM HR	GRADE
	HR ATT	HR ERND	HR AVE	PT	GPA
OKLAHOMA STATE UNIVERSITY					
NON-DEG	7	7	7	21.00	3.00
MASTERS	21	21	21	80.00	3.80
CUMULATIVE					
NON-DEG	7	7	7	21.00	3.00
MASTERS	21	21	21	80.00	3.80

********** END OF TRANSCRIPT **********

AN OFFICIAL SIGNATURE IS WHITE WITH A GRAY BACKGROUND — REJECT DOCUMENT IF SIGNATURE BELOW IS DISTORTED

This officially sealed and signed transcript is printed on gray SCRIP-SAFE® security paper with the name of the university printed in white type across the face of the document. When photocopied the word COPY should appear. A raised seal is not required. A BLACK ON WHITE OR COLOR COPY SHOULD NOT BE ACCEPTED.

The Oklahoma State Regents for Higher Education acting through

Oklahoma State University

have admitted

Fessessework G. Guale

to the degree of

Master of Science

Physiological Science

and all the honors, privileges and obligations belonging thereto,
and in witness thereof have authorized the issuance of
this Diploma duly signed and sealed.

Issued at the Oklahoma State University at Stillwater, Oklahoma on the
fourth day of May, nineteen hundred and ninety-six

For The Regents

Chairman

Secretary

Chancellor

For the University

Chairman, Board of Regents

President of the University

Dean of Division

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ADDIS ABABA UNIVERSITY

የአዲስ ፡ አበባ ፡ ዩኒቨርሲቲ ፡ ንባኤ ፡ ከከፍተኛ ፡ ትምህርት ፡ ኮሚሽን ፡ በተሰጠው ፡ ሥልጣን ፡ መሠረት ፡

The Senate of Addis Ababa University by virtue of the powers vested in it by the Commission for Higher Education hereby grants to :

በእንስሳት ሕክምና የዶክተርነት ዲግሪ

Fessessework Guale G.Tsadik

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THE DEGREE OF

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DOCTOR OF VETERINARY MEDICINE

ሰጥቷል ።

ለዚህም ፡ ምስክር ፡ ይሆን ፡ ዘንድ ፡ በዲፕሎማው ፡ ላይ ፡ የዩኒቨርሲቲውን ፡ ማኅተም ፡ አትሞ ፡ ፈርሞበታል ። አዲስ ፡ አበባ ፡ ሐምሌ ፡ ሰባት ፡ ቀን ፡ አሥራ ፡ ዘጠኝ ፡ መቶ ፡ ሰማንያ ፡ ሁለት ፡ ዓመተ ፡ ምሕረት ፡ ተሰጠ

with all Honours, Privileges and Obligations pertaining thereto and in witness thereof has authorized the issuance of this diploma duly signed and sealed. Issued in Addis Ababa on this Fourteenth day of the month of July in the year Nineteen-Hundred and Ninety.

የዩኒቨርሲቲው ፕሬዚደንት
President of the University

የእንስሳት ሕክምና ፋኩልቲ ዲን
Dean, Faculty of Veterinary Medicine

Curriculum Vitae

Fessessework Guale, DVM, MS, D-ABVT, D-ABFT-FT
Harris County Institute of Forensic Sciences
1885 Old Spanish Trail
Houston, TX 77054

Education

1993-1996: Oklahoma State University, Stillwater, OK

- **MS**: Physiological Science, College of Veterinary Medicine
- **Thesis**: Evaluation of Chick Embryo Motoneuron Cultures for the Study of Neurotoxicity. Published in 1997.

1985-1990: Addis Ababa University, Ethiopia

- **DVM**: College of Veterinary Medicine
- **Thesis**: Prevalence of Coccidiosis and Identification of *Eimeria* Species

1981-1983: Addis Ababa University, Ethiopia

- **BS**: Animal Science, College of Agriculture

Professional Experience

May 2013-present: Toxicology Analytical Operations Manager: Harris County Institute of Forensic Sciences, Forensic Toxicology Section

- Manage the daily operation of the laboratory
- Perform technical, administrative and expert review of completed cases
- Provide consultations and toxicological interpretations to pathologists and law enforcement personnel
- Provide expert testimony
- Oversee the QA/QC operation of the laboratory
- Oversee the training and continuing education of staff members
- Hire subordinate staff
- Prepare annual budget for the laboratory
- Perform yearly performance evaluation of toxicology laboratory employees
- Prepare and present scientific articles

May 2011-May 2013: Assistant Chief Toxicologist: Harris County Institute of Forensic Sciences, Forensic Toxicology Section

- Manage the daily operation of the toxicology laboratory
- Perform technical, administrative and expert review of completed cases
- Provide consultations and toxicological interpretations to pathologists and law enforcement personnel
- Provide expert testimony
- Plan and execute method development projects
- Prepare and present scientific articles
- Oversee the QA/QC operation of the laboratory
- Oversee the training and continuing education of staff members
- Hire subordinate staff
- Prepare annual budget for the laboratory
- Perform yearly performance evaluation of toxicology laboratory employees
- Prepare and present scientific articles

June 2008-May 2011: Toxicologist I: Harris County Institute of Forensic Sciences, Forensic Toxicology Section

- Manage and plan the daily operation of the toxicology laboratory
- Technical and administrative review completed cases
- Maintain laboratory compliance with quality control and quality assurance and accreditation by ABFT and ASCLD/LAB International
- Provide expert testimony

June 2006-June 2008: **Toxicologist II Specialist**: Harris County Medical Examiner's Office, Forensic Toxicology Section

- **GC/MS Section Team Leader**: Provide leadership in all the activities of the section
- Technically review analytical data in the section
- Perform technical review and administrative review of completed cases
- Facilitate the completion of cases in a timely manner
- Responsible for troubleshooting instrument malfunctions and contact service technicians when necessary
- Review standard operating procedures, make necessary adjustments and/or changes to improve the efficiency of the analytical methods
- Assign team members daily duties
- Responsible for training and continuing education of team members
- Manages personnel issues in the section, including time sheets, time off requests, schedules, etc.
- Conduct the performance evaluation of team members

2000-2006: **Research Associate/Toxicologist**: Colorado State University Health Sciences Center, Research and Forensic Toxicology Laboratory

- **Laboratory Manager**: Manage the day to day activity of the Research and Forensic Toxicology Laboratory
- Responsible for maintaining the laboratory's accreditation

- Organize the basic research activity in the laboratory
- Responsible for employee training and counseling
- Develop and validate new analytical methods
- Analyze, review and report analytical data
- Consult with law enforcement agencies, pathologists, and veterinarians on toxicology interpretation
- Provide expert testimony

1991-2000: Analytical Toxicologist: Oklahoma Animal Disease Diagnostic Laboratory, Oklahoma State University

- Analyze biological and environmental samples for drugs, pesticides, heavy metals, mycotoxins, feed additives, petroleum hydrocarbons, water pollutants and etc.
- Used GC/MS, GC-FID, HPLC, AA, TLC, ELISA and bench chemistry
- Write and review standard operation procedures
- Analyze data, interpret and report results
- Consult with veterinarians and provide diagnostic service
- Perform research to improve and develop analytical methods
- Provide training to residents in analytical toxicology

Certificates

- 2007-**Diplomate: American Board of Forensic Toxicology**
- 1999-**Diplomate: American Board of Veterinary Toxicology**

Publications

- Fessessework Guale, Shahriar Shahreza, Jeffrey P. Walterscheid, Hsin-Hung Chen, Crystal Arndt, Anna T. Kelly and Ashraf Mozayani: **Validation of LC-TOF-MS screening for drugs, metabolites and collateral compounds in Forensic Toxicology specimens.** Journal of Analytical Toxicology, Vol. 37. No. 1, 2013 pages 17-25

- K. Bischoff, F. Guale: **Australian Tea Tree (*Melaleuca alternifolia*) oil poisoning in three purebred cats**. Journal of Veterinary Diagnostic Investigations, Volume 10, 1998 pages 208-210

- Fessessework G. Guale, George E. Burrows: **Evaluation of Chick Embryo Motoneuron Cultures for the Study of Neurotoxicity**. Natural Toxins, Volume 5, Number 3, 1997, pages 115-120

- FG. Guale, EL. Stairs, WB. Johnson, WC. Edwards, JC. Haliburton: **Laboratory Diagnosis of Zinc Phosphide Poisoning**. Veterinary and Human Toxicology, Volume 36, No. 6, December 1994, pages 517-519

Presentations

- **A Case of Death by Diclazepam**: **Lorazepam in Disguise**: Presented at the American Academy of Forensic Sciences annual meeting, February 26, 2016, Las Vegas, NV

- **Recent Trends of Designer Drugs in Harris County Texas:** Presented at the American Academy of Forensic Sciences annual meeting. February 21, 2014**,** Seattle, WA

- **Toxicology result of drivers of fatal motor vehicle accidents in Harris County, TX, 2011**: Presented at the American Academy of Forensic Sciences annual meeting, February 22, 2013, Washington, DC

- **Pharmacokinetics and Interpretation of Cocaine**: Presented to Fellows and Pathology Residents of the Harris County Institute of Forensic Sciences, November 2011, Houston, TX

- **Proof of concept for a comprehensive method for rapid drug screening of whole blood with UHPLC accurate-mass TOF LC/MS**: Presented at the SOFT-TIAFT joint meeting on September 29, 2011, San Francisco, CA

- **Drug Testing and Interpretation in Postmortem Toxicology:** Presented at Harris County Institute of Forensic Sciences: Topics in Forensic Sciences Conference, April 15, 2011, Houston, TX

- **Pharmacokinetics and Interpretation of Cocaine**: Presented to Fellows and Pathology Residents of the Harris County Medical Examiner's Office, November 2010, Houston, TX

- **Phencyclidine (PCP) in fatally injured drivers and DUID arrests in Harris County, Texas:** Presented at the American Academy of Forensic Sciences, annual scientific meeting, February 24, 2010, Seattle, WA

- **Pharmacokinetics and Interpretation of Cocaine**: Presented to Fellows and Pathology Residents of the Harris County Medical Examiner's Office, December 2009, Houston, TX

- **Interpretive DUID Workshop**: Workshop Coordinator, SOFT/AAFS Drugs and Driving Committee Seminar, May 12-13, 2009, Houston, TX

- **Pharmacokinetics and Interpretation of Cocaine**: Presented to Fellows and pathology residents of the Harris County Medical Examiner's Office, October 2008, Houston, TX

- **Interpretive DUID**: Presented to Toxicology staff at Harris County Medical Examiner's Office, June 2008, Houston, TX

- **Clinical or Forensic Case-A Crossroad for Interpretation**: Presented to Toxicology staff, at the Harris County Medical Examiner's Office, November, 2007, Houston, TX

- **Applications of Fast GC-MS in the analysis of Opiates**: Poster presented on October 19, 2007 at Society of Forensic Toxicology Continuing Education Workshop, Raleigh-Durham, NC

Training

- Scientific sessions, AAFS Annual Scientific Meeting, February 25-27, 2016, Las Vegas, NV

- Scientific sessions, AAFS Annual Scientific Meeting, February 20-22, 2014, Seattle, WA

- Scientific sessions, AAFS Annual Scientific Meeting, February 21-23, 2013, Washington, DC

- Fundamentals of LC/MS/MS, RTI on-line course, December 20, 2011, HCIFS

- Specimen Validity Testing, RTI on-line course, October 27, 2011, HCIFS

- Scientific sessions, Joint SOFT-TIAFT Conference, September 28-30, 2011, San Francisco, CA

- Scientific sessions, AAFS Annual Scientific Meeting, February 23-25, 2010, Seattle, WA

- Scientific sessions, SAT, Fall 2010 Meeting, September 16-18, 2010, Houston, TX

- Alcohol Extrapolation and the use of BAC Tracker Software, August 19, 2010, HCIFS

- Medicolegal Death Investigation Seminar, June 15, 2010, HCIFS

- Confirmation Bias, Ethics, and Mistakes in Forensics: Forensic Ethics Seminar, May 12, 2010, HCIFS

- ISO/IEC 17025 and Forensic Service Provider Accreditation Workshop, May 10-14, 2010, HCIFS

- GC/MS/MS Training, Agilent Technologies, February 8-12, 2010, HCIFS

- Traffic Fatality Investigation Seminar, Harris County Sheriff's Office, November 2009, Houston, TX

- Interpretive DUID Workshop, SOFT Continuing Education Commettee and SOFT/AAFS Drugs & Driving Committee Seminar, May 12-13, 2009, HCIFS

- Opioids and Pain Management, RTI training, on-line course, June 11, 2008, HCIFS

- Interpretive DUID Workshop, SOFT Continuing Education Committee and SOFT/AAFS Drugs & Driving Committee Seminar, May 6-8, 2008, West Palm Beach, FL

- Clinical or Forensic Case: A Crossroad for Interpretation, SOFT Continuing Education Committee Workshop, October 16, 2007, Raleigh-Durham, NC

ASCLD/LAB-*International*

STATEMENT OF QUALIFICATIONS

Name	Fessessework Guale	**Date**	09/02/2016

Laboratory	Toxicology

Job Title	Toxicology Analytical Operations Manager

Indicate all disciplines in which you do casework:

☐	**Drug Chemistry**	☒	**Toxicology**
☐	**Firearms/Toolmarks**	☐	**Biology**
☐	**Trace Evidence**	☐	**Questioned Documents**
☐	**Latent Prints**	☐	**Crime Scene**
☐	**Digital & Multimedia Evidence**		

List all category(ies) of testing in which you do casework:

Human Performance and Post-Mortem ForensicToxicology

Breath Alcohol Calibration Categories

☐	**Toxicology** - Breath Alcohol Measuring Instruments (The work of the laboratory MUST include calibration certificates- do not check the box if work is limited to breath/alcohol testing)
☐	**Toxicology** - Breath Alcohol Calibration Reference Material

Education: List all higher academic institutions attended (list high school only if no college degree has been attained)

Institution	Dates Attended	Major	Degree Completed
Oklahoma State University	1993-1996	Physiological Science	MSc
Addid Ababa University	1985-1990	Veterinary Medicine	DVM
Addis Ababa University	1981-1983	Animal Science	Bsc

Other Training: List continuing education, workshops, in-service and other formal training received. Please include the course title, source and date of the training.

1:SOFT: Society of Forensic Toxicologists Workshop, October 15-19, 2007, Raleigh, NC
2:Interpretive DUID workshop: SOFT/AAFS Drug and Driving and Continuing Education Committee Seminar, May 6-8, 2008, West Palm Beach, FL
3:Opioids and Pain Management: RTI training, on-line course, June 2008, Houston, TX
4: Interpretive DUID workshop: SOFT/AAFS Drug and Driving and Continuing Education Committee Seminar, May 12-13, 2009, Houston TX
5:Traffic Fatality Investigation Seminar, November 2009, Houston, TX
6:ISO/IEC 17025 and Forensic Services Provider Accreditation Wotkshop: May 10-14 2010, Houston, TX
7:Confirmation Bias, Ethics, and Mistake in Forensics: Forensic Ethics Seminar, May 12, 2010, Houston, TX
8. Medicolegal death investigation Seminar, June 15, 2010
9. Alcohol extrapolation and the use of BAC tracker Software, August 19, 2010
10. Southwestern Association of Toxicologists, Fall 2010 meeting, September 16-18, 2010 Houston, TX
11. Scientific sessions at the American Academy of Forensic Sciences, 62nd Annual scientific meeting, February 24-25, 2010 Seattle, WA

12. Scientific sessions at SOFT-TIAFT conference, San Fransisco, CA, September 21-23, 2011
13. Scientific sessions at the annual AAFS conference, Washington, DC, February 22-23, 2013
14. Scientific sessions at the annual AAFS conference, Seattle, WA, February 20-21, 2014

Courtroom Experience: List the discipline/category(ies) of testing in which you have qualified to testify as an expert witness and indicate over what period of time and approximately how many times you have testified in each.

DWI/DUID: 2/2004, 1/2009, 1/2010, 1/2011, 6/2012, 2/2013, 2/2014, 14/2015

Professional Affiliations: List any professional organizations of which you are or have been a member. Indicate any offices or other positions held and the date(s) of these activities.

Southwestern Association of Toxicologists
American Academy of Forensic Sciences
California Association of Toxicologists
American Board of Veterinary Toxicology

Employment History: List all scientific or technical positions held, particularly those related to forensic science. List current position first. Be sure to indicate employer and give a brief summary of principal duties and tenure in each position.

Job Title	Toxicology Analytical Operations Manager	**Tenure**	present
Employer	HCIFS		
Provide a brief description of principal duties:			
Provide leadership in the analytical operations of the toxicology laboratory, Responsible for the day to day activity of analysts and the work flow of cases			

Job Title	Assistant Chief Toxicologist	**Tenure**	2 years
Employer	HCIFS		
Provide a brief description of principal duties:			
Assist the Chief Toxicologist in the management of the laboratory			

Job Title	Toxicologist I	**Tenure**	2 years
Employer	HCIFS		
Provide a brief description of principal duties:			
Supervise the GC/MS and LC/MS/MS sections of the toxicology laboratory			

Job Title	Toxicologist II Specialist	**Tenure**	2 years
Employer	HCIFS		
Provide a brief description of principal duties:			
GC/MS section team leader, perform data analysis, data review, technical and administrative review of cases			

Job Title	Forensic Toxicology Laboratory Manager/Research Associate	**Tenure**	5.7
Employer	University of Colorado Health Sciences Center		
Provide a brief description of principal duties:			
Assist the lead investigator in basic research, manage the day to day activity of the forensic toxicology laboratory			

Other Qualifications: List below any scientific publication and/or presentation you have authored or co-authored, research in which you are or have been involved, academic or other teaching positions you have held, and any other information which you consider relevant to your qualification as a forensic scientist.
(Use additional sheets if necessary.)

PRESENTATIONS:

1. Recent Trends of Designer Drugs in Harris County, Texas: AAFS annual conference, Seattle, WA,

February 17-22, 2014
2.Toxicology Result of Drivers of Fatal Motor Vehicle Accidents in Harris County, Texas in 2011: AAFS Annual conference, washington, DC, February 22, 2013
3. Proof of concept for a comprehensive method for rapid drug screening of whole blood with UHPLC Accurate-mass TOF LC/MS, presented at the SOFT-TIAFT confernce on september 23, 2011, San fransisco, CA.
4. Interpretation and Pharmacokinetics of Cocain: Presented to Pathology Fellows of HCIFS. December 2010
5. Phencyclidine (PCP) in Fataly Injured Drivers and DUID Arrests in Harris County, Texas : presented at the American Academy of Forensic Sciences, 62nd Annual Scientific Meeting, February 24, 2010, Seattle, WA
6. Interpretation and Pharmacokinetics of Cocaine: Presented to Pathology Fellows and Toxicology Staff of HCIFS, December 2009, Houston TX
7. Interpretive DUID: Presented to Toxicology Staff of HCIFS, July 2008, Houston, TX
8. Poster presentation on Fast opiate analysis by GC/MS, SOFT, October 15-19, 2007. Raleigh, NC
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CERTIFICATES:
1: Diplomat:American Board of Veterinary Toxicology
2: Diplomat: American Board of Forensic Toxicology: Forensic Toxicology Specialist

REPORTER'S RECORD

Volume 1 of 1 Volume

Trial Court Cause No. 1459301

THE STATE OF TEXAS	:	IN THE DISTRICT COURT OF
VS.	:	HARRIS COUNTY, T E X A S
JAIME JOEL FLORES	:	177TH JUDICIAL DISTRICT

_____

EXCERPT OF TESTIMONY OF
DR. FESSESSEWORK GUALE

_____

On the 22nd day of August, 2016, the following proceedings came on to be heard in the above-entitled and numbered cause before the Honorable H.D. Black, Jr., Judge presiding, held in Houston, Harris County, Texas.

Proceedings reported by computerized stenotype machine.

Linda Hacker, Texas CSR #4167
Official Court Reporter - 177th District Court
1201 Franklin, 19th Floor
Houston, Texas 77002
713-755-6332

A P P E A R A N C E S

Attorney(s) for the State:

Ms. Lauren Clemons
SBOT No. 24077068
Ms. Alison Baimbridge
SBOT No. 24040160
Assistant District Attorneys
1201 Franklin, Suite 600
Houston, Texas 77002
Phone: 713-274-5800

Attorney(s) for the Defendant:

Mr. Maverick Ray
Attorney At Law
SBOT No. 24080451
310 Main Street, Suite 300
Houston, Texas 77002
Phone: 281-947-2007

Mr. Jonathan Stephenson
Attorney at Law
SBOT No. 24046913
111 W. 15th Street
Houston, Texas 77008
Phone: 832-930-0559

CHRONOLOGICAL INDEX

VOLUME 1
(EXCERPT OF DR. FESSESSEWORK GUALE)

P R O C E E D I N G S

August 22, 2016

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(Jury seated.)

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FESSESSEWORK GUALE,

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MS. CLEMONS:

Q. Would you introduce yourself to the jury?

A. My name is Fessessework Guale, spelled F-E-S-S-E-S-S-E-W-O-R-K, G-U-A-L-E.

Q. And just because I want to refer to you as the right title, are you a doctor?

A. Yes.

Q. Okay. So you prefer Dr. Guale?

A. Yes.

Q. All right. So, Dr. Guale, what do you do for a living?

A. I'm hired by the Harris County Institute of Forensic Sciences, and I work as a toxicology analytical operations manager.

Q. Is that the same Institute of Forensic Sciences that Josie Hollowell works at?

A. Yes.

Q. Okay. And you said you are an operations manager; is that correct?

A. Yes.

Q. What exactly does that mean?

A. That means we have a lot of testing to perform, so all those performances are considered analytical operations. So I oversee the cases the moment they come in and they go out, and I look to the overflow of the cases. I supervise the employees' stuff and the daily activity of the lab would be monitored and I make sure that cases come in will be going out, all the work done properly.

Q. Okay. And can you take us through your educational background to get to the Institute of Forensic Sciences?

A. I have a DVM -- that stands for Doctor of Veterinary Medicine -- and also a Master's degree in toxicology, and I'm also board certified by the American Board of Veterinary Toxicology and also by the American Board of Forensic Toxicology.

Q. And so in addition to your education, do you also have training through your job or anywhere in the effects of alcohol and drugs on a body?

A. Yes.

Q. Okay. And what does that training entail?

A. It includes all the chemical nature of the drugs and what the drug does to your body and what the body does to the drug and what are the outward performances and behaviors shown after the person doing the drug is examined.

Q. Okay. And have you ever testified before as an expert on the effects of alcohol or drugs on a body?

A. Yes.

Q. Would you say few or many times?

A. Many times.

Q. And does that include many times here in Harris County?

A. Yes.

Q. All right. Now, in kind of why we're here today, are you familiar with the case with the laboratory number 13-11740?

A. Yes.

Q. And how are you familiar with this case?

A. I have evaluated the case and signed it out, and my signature is on the right side of the report.

Q. What does it mean when you say you

evaluated the case?

A. One of the function of the expert, a reviewer, is to look into the case and to see all the -- all the testing is done properly and all the report satisfies what the requirement of the laboratory and the recording quality is maintained and no additional testing is required because the case is done appropriately by the SOP. So once I review that, then I will sign it out as to the correctness of the report.

Q. And SOP, is that standard operating procedures?

A. Yes.

Q. Okay. And so if your signature ends up on a report, that means that you basically made sure that everything was done correctly in this case?

A. Correct.

Q. And you said your signature is on the report in this case?

A. Yes.

Q. So, Dr. Guale, I kind of want to go through first talking about your training and experience what you have discovered on cocaine. Are you familiar with the effects of cocaine on the body?

A. Yes.

MR. STEPHENSON: Judge, can we approach real quick?

THE COURT: Yes.

(Proceedings at the bench:)

MR. STEPHENSON: Judge, I think we're about to get into the -- her opinion as to how cocaine or alcohol would have impacted the defendant and what the various substances -- how they interact and I would like to have a 702 hearing, a *Kelly* hearing, based on that outside the presence of the jury right now.

THE COURT: Okay.

(Proceedings in open court:)

THE COURT: Folks, we're going to ask you to have a seat in the jury room for a few minutes.

THE BAILIFF: All rise.

(Jury retired.)

THE COURT: Please be seated.

MR. STEPHENSON: May I, Judge?

THE COURT: Yes.

MR. STEPHENSON: Thank you.

DIRECT EXAMINATION

BY MR. STEPHENSON:

Q. Dr. Guale, I want to ask you a few questions about your opinion in this case with regard to the substances that were found in this sample. Okay?

A. Okay.

Q. You were about to talk about the impacts of cocaine on the human body, and particularly I'm guessing you have an opinion on as to whether or not it was impacting Jaime Flores at the time of driving in this instant case. Is that true?

A. True.

Q. Okay. And what is your opinion with regard to whether or not it was impacting him at the time of driving in this case?

A. I -- you want me to start going through the cocaine effects or --

Q. No, I just want to know if you have an opinion about whether or not this amount of cocaine that was found in his system would have been impairing or intoxicating at the time he was driving.

A. Well, that depends on additional information. The numbers really by themselves would

not tell me what -- how the person was impaired or the degree of impairment or anything like that. I can only say this person had taken this cocaine and ethanol and we found this much cocaine and ethanol in his system but at that time of the blood draw.

Q. Okay. Is it possible to, I guess, what we call extrapolate from that amount of cocaine and determine if it would have been impairing or intoxicating at the time he was driving?

A. We don't normally do extrapolation on drugs.

Q. Okay. So it's fair to say that you don't have an opinion as to how this cocaine was impacting him or if it was impacting him at the time of driving?

A. How and -- how I don't know but I can tell you it is impacting him but I don't know how.

Q. Okay. It could be improving his performance?

A. I can't comment until you give me specifically this is what he was doing. Could it be due to the cocaine or the alcohol?

Q. Okay. Specifically what's the half-life of cocaine? How long do you expect it to stay in the system?

A. Well, a half-life is when cocaine -- half of it is metabolized or changed it to be BE which is inactive form. For the cocaine it's about 45 minutes.

Q. Okay. And that varies, correct?

A. Yes.

Q. It could be as little as 10 or 15 minutes?

A. We have -- you have to differentiate between the effect of cocaine or what you subjectively feel or actually having the cocaine in your system.

Q. Sure. Just -- just talking about --

A. So you can feel -- you know, if you are injecting it, the cocaine, for instance, you can feel the effect right away; but that doesn't mean, you know, cocaine is going to be only there for a while, only for 15 minutes.

Q. Right.

A. But you can subjectively feel it and the cocaine is staying in your system are two different things.

Q. Right. So you could have cocaine in your system and not be under the influence of the cocaine? It could not be impacting your mental and

physical faculties?

A. It always does.

Q. Always?

A. It always does.

Q. At any level?

A. It's just -- it's just how is the question; but there is a reason that somebody is taking it, to have a feeling, subjective feeling. Whether it's euphoria or dysphoria, that's an effect. So if you have that in your system, there's always an effect.

Q. Okay. But just in terms of having it in your system, it can range anywhere from what to what?

A. In the beginning, when you shoot cocaine, you will have euphoria. Okay. That's an unrealistic sense of well-being. You're happy. You're excited and, you know, you are energetic. And then when the time goes by, there's a called crash phase which is the amount of cocaine is going out of your system; and at that time at the crash phase, you're going to have different effects. You will be depressed. You will be fatigued. You will be sleepy or not able to sleep.

So these are opposite effects, the

euphoria and dysphoria, opposite effects; but it depends on which stage you are.

Q. Okay. Is it possible for you to hypothesize at what point those effects come into play?

A. I can tell from the result that the BE is there. That means he had metabolized it. So when you see BE, cocaethylene and ethanol, that means the body has got time to process the alcohol and the cocaine to create cocaethylene which is the two combined. So the body has metabolized some. So if you want me to say depending on how much he had put in his system, I can say this could be at a crash phase because it has metabolized.

Q. Okay. But you don't know how much any given person has taken?

A. No.

Q. So for you to say whether or not he's in the crash phase or the euphoria phase, you would be speculating?

A. Usually when you are doing, you know, even the minimum amount of, you know, cocaine, what you see at euphoric phase is ten times more than this. That's why I can look at the number and I can tell you that he would be most probably in the crash

phase.

Q. At the time this test was taken?

A. Yes.

Q. You can't speak to what it would have been an hour prior?

A. It could be he could be in euphoric phase or --

Q. Okay.

A. -- dysphoric phase.

Q. Don't know?

A. I don't know.

Q. There's not a set given blood concentration of cocaine that indicates impairment, correct? For instance, we have .08 in alcohol where you're presumed to have impairment, correct?

A. Oh, you're talking about the per se law that says, you know, if you have this much? No.

Q. Sure.

A. No.

Q. So all you can do is look at it and say that a person has it in their system, correct?

A. Yes.

Q. You can't say how it's impacting them and to what degree, correct?

A. Like, I could use this, I can tell you

what has been shown through, you know, performance and literature that, you know, the person could have been in euphoric phase or most probably in dysphoric phase. I can tell that; but how that affected him while he was driving, I need more information.

Q. Okay.

A. Yeah.

Q. And what type of information would you need?

A. Well, how was he driving? Was there any eyewitness account? Or what did he say or what happened before the stop and what was the stop for, you know, the reason for the stop.

Q. So you would use the evidence for the case to match that up with the results that you see?

A. Yeah.

Q. So, for instance, because a person fell asleep, you would associate this with a dysphoric phase?

A. It's highly probable, yeah, because the drugs are there.

Q. Okay. There's no way to know for sure. These are all educated guesses, right?

A. What I have is -- what I have is scientific fact and the result that it was in his

system, and I can relate that to what this result is.

Q. But generally speaking you would say it takes a maximum of what for cocaine, specifically cocaine, to go out of your system? From the time I take it to the time it's out, what's the range?

A. If you just -- generally, generally speaking, you need from five to seven half-lives, you know, half-lives for the -- you know, for the cocaine to disappear from your system. So probably, you know, after six hours, you may not see it in the blood but you may see it in the urine. So --

Q. Well, for six hours you're going to see the benzo -- the BE --

A. Uh-huh.

Q. -- but I'm talking about specifically cocaine.

A. It's about four hours. It depends on how much you took, though. You know, can be -- can last up to four hours or six hours depending on how much is in your system.

Q. Okay. Are you familiar with the NHTSA Drug and Human Performance Fact Sheets?

A. Yeah, I believe.

Q. They do studies on cocaine. They look

at things to figure out what the -- what -- how these drugs impact drivers.

A. Uh-huh.

Q. NHTSA says that the half-life of cocaine is short, approximately 0.8 to 0.2 hours. Six hours for BE, but cocaine 0.8 to 0.2.

A. Uh-huh.

Q. That's not four hours, right?

A. No. It says half-life.

Q. Right.

A. Half-life for cocaine is .8. This is almost .75 which is 45 minutes.

Q. Okay.

A. Plus or minus. This is a correct statement.

Q. Okay. So we're looking at 45 minutes?

A. 45 minutes of a half-life. So when it says a half-life, that means half of your -- half of the cocaine that was introduced is metabolized or changed it to another. So it takes four -- actually five to seven half-lives for the cocaine to get out of your system.

Q. Okay.

A. So according to that, it's actually right.

Q. Okay. And so when you have .02, there's no way to tell how much a person took though, correct?

A. There are experimental studies that depending on which route you use, if you took about -- I can give you an example.

Q. Sure.

A. If you take -- take about, you know, 100 up to 120 and you smoke that or you insufflate that, you may be at a .01, you know, and then 30 hours -- 30 minutes you may peak that level. So you can use that as a model; but it's always variable whether you are, you know, injecting it or you are insufflating it or you are smoking it.

Q. So it varies by your method of ingestion, correct?

A. Yes, uh-huh.

Q. Okay. And there's no way to know unless a person admits to what they did, how they did it?

A. Yeah.

Q. So in applying the impacts, I mean, you're -- without knowing those facts, you can't specifically say how it -- how long it would have been impacting them?

A. I can give you an example based on this

data.

Q. Okay.

A. And based on however -- you know, like, for instance, if he was injecting it, 20 milligrams or, you know, 30 milligrams, you injected it and then you'll have a maximum of about a .2 or .3 right away. And then if you look at this, you know, cocaine right here, it's .02 which is really, really ten times lower. So you can -- you can deduce from what has been seen experimentally and what's been seen in that subject and you can say -- or draw conclusion from there.

Q. Okay. Different people metabolize at different rates, right?

A. Correct.

Q. What about chronic users? Would chronic users' metabolism rates vary?

A. For chronic users, yes, you know, they -- they keep putting more drugs in them because, you know, the body would need more even in a short period of time, especially when you are ingesting. You know, the effect wanes after, you know, 15, 30 minutes and then you get the dysphoric phase and you start craving the drug and then you put it back again and then it goes on like that.

So --

Q. Is it possible for cocaine to stay in the system of a chronic user for longer that it would be for a normal person?

A. Yeah.

Q. So it's possible they may not be under the impact of it. It's just remaining in the system due to the continued use?

A. Correct.

Q. With regard to alcohol and its -- its impact on a person, in looking at this case, is this the case where -- is this a case where you've been asked to extrapolate?

A. Yes, I have been asked to extrapolate.

Q. Okay. And can you give us that opinion and tell us what you're basing that extrapolation on?

A. So, I was given information, the demographic information about the person and the first time of the drink and the last time of the drink.

Q. Okay. So you were given height, weight?

A. Yes.

Q. Age?

A. Yes.

Q. Gender?
A. Yes.
Q. And what other factors about the individual when you say demographic information? Anything else?
A. Those are the ones you just mentioned.
Q. Those are the ones. Okay.
And what height were you given?
A. Huh?
Q. What height?
A. Okay. The height is 71 inches.
Q. Okay.
A. The weight in pounds is 200.
Q. Okay.
A. And the male, age 30.
Q. Okay. And then time of last drink?
A. Time of the last drink is 17th hour.
Q. Okay.
A. And time of first drink is 14th hour.
Q. Okay.
A. And time of a known BAC is 2:47 a.m.
Q. And that's .10?
A. .10 alcohol, yes.
Q. Okay. Anything else that you're given?
A. I don't remember if there's any other

additional information.

Q. Okay. And so were you able to reach an extrapolation number?

A. Yes.

Q. Okay. And what is that?

A. It's .122.

Q. .122. Okay.

Now, did they tell you the amount of drinks?

A. No.

Q. Okay. Okay. So the only thing you know is time of last drink, time of first drink?

A. No, you don't need the number of drinks really.

Q. Okay.

A. You can deduce that from the amount of alcohol that you find in a system.

Q. Okay. And, so, but what we're talking about here, 14:00, that's 2:00 o'clock --

A. In the afternoon.

Q. -- in the afternoon?

A. Uh-huh, yeah.

Q. Okay. P.m. And then the last drink is at 5:00 o'clock p.m., correct?

A. Yes.

Q. And the test is at 2:47 a.m.?
A. Yes.
Q. And so we're talking about from the time of the last drink to the time of the test roughly nine hours, almost ten hours?
A. Yes.
Q. Okay. And so extrapolating from 2:47 a.m. to the time of driving at 1:31 -- well, I guess you said you can figure out how many drinks you think a person had. How many drinks are we talking about for a person to still be at .10 ten hours later?
A. Okay. Based on that information, the number of drinks was standard of this, almost 14.
Q. 14 drinks?
A. Uh-huh.
Q. Okay. And 14 drinks -- and so does it matter to you when a person last ate, whether or not they're on an empty stomach, any of that nature?
A. But there's too long of an hour. Really doesn't matter.
Q. Right.
A. Whether ate or not ate, you know, that's almost nine hours there.
Q. Right.

A. Nine and a half hours. So -- but then the extrapolation is just -- should be only just simple from 2:47 to 1:31. Just --

Q. And all you do --

A. -- you know, zero-order kinetics and then at the elimination. You use elimination rate.

Q. He has to be in elimination because of the distance from his last drink?

A. Yes, yes.

Q. And so from there all you do is just take the average number of -- the average elimination rate and apply it to the number that you got. That's it?

A. Correct.

Q. And you assume him to metabolize at the rate of standard rate?

A. Eliminate at the standard rate.

Q. Okay. Which is?

A. Which is .015.

Q. And that's assuming that the last -- time of last drink is accurate, correct?

A. Correct.

Q. If the time of last drink is within, say, an hour of the time of the driving, it would be possible that he would still be in the absorption

phase, correct?

A. Correct.

Q. And the time of driving is what matters here, correct?

A. Yeah, that's -- that's where we want to extrapolate to.

Q. Right.

A. Yeah.

Q. And if he's in the absorption phase still at the time of the test -- or at the time of driving, rather, it's certainly possible based on the number given here that he could be below a .08?

A. If he was absorbing, it's possible he could be below .1; but I don't know if it is possible to be below .08.

Q. Okay. Would it be lower?

A. Below .1?

Q. But you're not able to calculate how much lower?

A. Below that .1?

Q. Uh-huh.

A. It could be lower than a .1, but I don't know if it could be lower than .08.

Q. Okay. So assuming he had a drink at 1:25 -- and we're looking at, I mean, five minutes

before driving, right? You're still within an hour and a half for standard potential absorption, correct?

A. Say that again. Let me see if I can come up with a better calculation here.

Q. Let's say he had a drink at 1:20 or 1:25. His time of driving is 1:30, 1:31.

A. Okay. If he was drinking 1:20?

Q. Uh-huh.

A. At 1:20. And the time of driving was 1:00 --

Q. 1:30, 1:31.

A. 1:31 or that means he was within ten minutes?

Q. Uh-huh.

A. Okay.

Q. And the test is at 2:47.

A. So suppose he was drinking one drink at the end and he was absorbing it for an average -- average absorption we give one hour. So until 2:00 -- if at 1:20, until 2:20 he was absorbing. Okay. So that would -- that would give him with elimination being .105. It would give him a .02 alcohol level with just the average person absorption. So one hour, by 2:20, he would have

added about a .02; but it's also after the 2:20, he's going to be eliminating .15 -- .015. Really the only difference is going to be there is going to be only a .005.

Q. So that one hour and 20 minutes for absorption only would make a .005 bit of difference?

A. Uh-huh.

Q. But from your calculation, the same time given a time of last drink where he's in elimination raises it .02?

A. Yes, it would -- it would raise -- the elimination, we're just using a constant elimination rate which is a .015. So if you are absorbing at that time, the amount that you are absorbing and the amount you are eliminating should be different. You are absorbing .02, and you are eliminating .015. Whatever is left is what's accumulating in your body, in your system, which is .005.

Q. Okay.

A. When you subtract .02 and .015, it's going to be .005.

Q. So you're always -- if you're in absorption, you will always only have a change of downward of .005?

A. If you are absorbing or if you are

eliminating?

Q. If you are absorbing, it sounds like you're saying you will always have the same rate of decrease of .005 because you're always going to assume he's taking in .02 and eliminating .15 -- or .02 and --

A. I can show you all the data printout which is, you know, the computerized data printout, how much every 30 minutes, you know, you would eliminate based on scientific fact that was plugged, you know, in the formula. So --

Q. Okay. What computer program are we talking about?

A. It's a Backtracker computer program.

Q. Who created this program?

A. I -- I don't remember their names, but --

Q. Okay. Has it been peer reviewed?

A. I believe so.

Q. By who?

A. I don't remember the details.

Q. Okay. What's the -- and the name of it is just Backtracker?

A. Uh-huh.

Q. And it's a computer system -- this is

what you used to extrapolate in this case?

A. Yes.

Q. You don't know what's the -- what's the underlying scientific theory that it's based upon?

A. Based on the Widmark Theory.

Q. Okay.

A. And there are other theories that are included. There are six formulas included in this Backtracker software where you can get the average, not only depending on one. You get the average from all of those. Those are the Widmark, the Watson, the Forrest, the Seidl, Ulrich, and Mozayani.

Q. Okay. So you just plug in numbers to this computer software program, and then it tells you what it is?

A. Yeah, but, you know, you don't -- you really don't have to use this for this particular case.

Q. Okay.

A. You can -- you know, you can use the average elimination time and just calculate by the hours from the -- from the time of the draw to the time of the driving. You really don't have to use this. It's a very simple calculation really.

Q. Okay. But in this case you did use

this?

A. I did use it, yes.

Q. Is it widely used in your -- do other laboratories use this software?

A. I don't know who use it and who doesn't use it really, but we use it.

Q. Okay. So you don't know if other people have accepted it as a scientifically valid software?

A. I don't.

Q. Do you know if it has a rate of error, a standard rate of error?

A. It does. It's called uncertainty of calculations. That's what it does.

Q. Okay. What is its uncertainty rate?

A. Analytical method QA/QC range for this is .005. The range is .015. That means you -- you have a BAC in here which is .122. You could have it in a range between -- plus/minus .015 according to this calculation.

Q. Okay. And so in this particular case you just plugged in the numbers into this database and it produced a result?

A. Yes.

Q. Okay. Just a few more questions, and I want to take you back to the cocaine.

With regard to how cocaine impacts the body, what -- what is the underlying scientific theory that you're basing that -- what you said on from euphoria to dysphoria?

A. What is the scientific theory?

Q. Right. I mean, is there something that you're basing -- your knowledge is based on? Articles? What articles are you relating this to?

A. Oh, there are so many articles that are experimental papers that are out. There are so many articles, but I can send you a lot of them if you want.

Q. Okay. But you don't have any one -- specific one that you relied upon?

A. No.

Q. Okay. Does it apply differently depending on the method of ingestion?

A. The numbers may vary by the method of ingestion or injections or ingestion or application. Yes, it's variable.

Q. And so without knowing the method of ingestion, it's difficult to ascertain a specific application of the cocaine to an individual; is that fair?

A. How he applied it, no. Yeah, that's

fair. I don't know.

Q. Okay. Is there a rate of error associated with how you determine the effects of cocaine on -- the amount of cocaine as related to an individual and impairment?

A. As we all are different, the impairment or the magnitude of impairment is really different. So --

MR. STEPHENSON: Pass the witness, Your Honor.

MS. CLEMONS: Just a few questions.

THE COURT: Okay.

CROSS-EXAMINATION

BY MS. CLEMONS:

Q. I just mainly want to talk to you about the computer program you just talked about. You said it actually is six different calculations it's using and that's on -- based on six different scientific theories, right?

A. Yes.

Q. So, like, the Widmark Theory, right? And there's a bunch of other ones, I know.

A. That's fine.

Q. But basically those theories that it's basing it on are all scientifically accepted widely

everywhere in the scientific community, right?

A. Correct.

Q. Okay. So really this program is kind of like a big calculator that y'all use, right?

A. Yes.

Q. And that's really all it is?

A. Yes.

Q. It's still relying on the scientific theory you can use by hand to do this extrapolation?

A. Correct.

Q. All right. And you actually said in this case you don't even really need it, right?

A. No.

Q. And if you were going to do this extrapolation by hand, would it be consistent with what the computer is telling you?

A. Yes.

MS. CLEMONS: Nothing further, Your Honor.

MR. STEPHENSON: Nothing further from the Defense, Judge.

THE COURT: Okay. Argument?

MR. STEPHENSON: We'll waive opening, Judge.

MS. CLEMONS: Judge, just from the

mere fact that she got up here and told us all about the effects of cocaine and the fact that she has a Master's and she's relied on studies show that she is perfectly able and qualified to talk about the effects of cocaine as well as the effects of alcohol. I think all of the questions we just got into really go towards the cross and weight, not admissibility.

She is clearly qualified to talk about all of the effects she knows in her experience and training; and specifically if they're going to attack a program, just as she just said, it's really just a calculator. She can do the calculations by hand, and it is based on scientific theory that's widely accepted in the scientific community.

MR. STEPHENSON: Just as far as the cocaine -- the opinion on cocaine is concerned, it's basically that it could be affecting or it could not be affecting him. We don't know how it was ingested so we don't know what the -- what the impact could be. It could be euphoric. It could be dysphoric. It could be a lot of different things. And without knowing a specific or having a specific way to apply it, the facts to the case, it would just mislead the jury and give them a wide range of possibilities.

With regard to the alcohol, this Backtracker that was used, we don't know if it's peer reviewed. We don't know if anybody else uses it. While it's based on six theories, we don't know how it applies or combines those theories. I don't think it meets the reliability test for extrapolation.

THE COURT: Reply?

MS. CLEMONS: As for the cocaine, specifically she said if she's provided the facts of the case, she can apply them to cocaine. In fact, she said if he's driving on the wrong side of the road or sleeping, that would be consistent with cocaine. So she did say she could apply it. It was just never asked of her specifically because that would go to the weight and not admissibility. She's qualified to talk about it. She just needs information provided to her.

And, once again, she basically said it's a calculator and it's consistent with her own calculations that she does based on scientific theory and in this case the Widmark Theory.

THE COURT: Okay. Under the *Kelly* and *Daubert* standards, I do find that Dr. Guale is qualified to render an opinion and that the computer

analysis is scientifically reliable.

Any reason why we can't bring the jury back in?

MS. CLEMONS: No, Your Honor.

MR. STEPHENSON: No, Judge.

THE COURT: Okay. Their -- we'll go for about 20 minutes. I think their lunch will be here about 1:00.

Okay. We can bring them back in.

MS. CLEMONS: Judge, just so I can start e-mailing some of my witnesses because, like, they're starting to ask me about a time frame, how long are we giving them for lunch starting at 1:00?

THE COURT: Let's give them 30 minutes.

MS. CLEMONS: Okay.

(Brief pause.)

THE BAILIFF: All rise for the jury.

(Jury seated.)

THE COURT: Okay. Please be seated.

DIRECT EXAMINATION RESUMED

BY MS. CLEMONS:

Q. Okay. Dr. Guale, so before the break,

kind of does it a little bit differently?

A. That's why, you know, there has been experiments -- several different experiments were performed; and the one, you know, formula that was deduced from those experiments -- because people just volunteer to do experiments on this because it's alcohol. So it's a pleasurable thing to do.

So we have so many experiments that was performed in humans and those data are collected and scientific formula was evolved from that. The oldest one would be Widmark formula. So that Widmark formula, you know, being used to calculate that, using all that data in statistical way and that formula was derived. It's been used so far in these calculations. So that's what we use to come up with that data.

Q. Okay. So -- and you also mentioned you're coming up with a range, right? Why are you coming up with a range versus, like, a certain number?

A. Yes. Because of the differences that has been seen. Like, for instance, the range for the elimination has been registered from .01 to .035. Of course, there are some outliers in here when you do the statistics; but when you see the

general population, with that general population rates is going to be the average. So that's what we use. How much or what the general population is showing as elimination rate is being used as an average, but there are extreme ends to it.

So if you want to calculate what would it have been if this person was a very slow eliminator or what would it have been if this person was a very fast eliminator, you can put that number in a range and give a result.

Q. Is that range, I guess, giving a benefit or a -- the opposite of benefit, like a negative to whoever you're kind of doing this range for?

A. Well, you are giving the benefit to that individual. You know, if he wasn't under, you know, a normal population, if he was exceptional, then you should give him the benefit of the doubt. This could be, you know, your result. So putting everything in a range gives the benefit of the doubt for the subject.

Q. All right. In this case were you able to get the information you needed in order to do what you called an extrapolation?

A. Yes.

Q. Okay. And what -- we went over that

information. One of the important things, right, is you need the time of the last drink?

A. You need the time of the first drink and the time of the last drink.

Q. And all this information, where -- I guess, basically you're relying on that information being correct, right?

A. Correct.

Q. Right. And that's the only way you can really do the extrapolation is to rely on that information, right?

A. Yes.

Q. All right. So in this case if you're -- you're provided the time of last drink as what?

A. 17th hour.

Q. So that's about 5:00 o'clock, right?

A. Yes.

Q. Break that down.

Okay. And the time of the first drink?

A. Is 14th hour, which is 2:00 o'clock in the afternoon.

Q. And you were given all of the -- when you say demographic information, the height, the weight about the defendant, correct?

A. Yes.

Q. And in this case --

MR. STEPHENSON: Your Honor, I'm going to object about the defendant. This is a hypothetical scenario.

THE COURT: Overruled.

Q. (By Ms. Clemons) In this case were you able to take information from the facts provided in this case to do an extrapolation in this case?

A. Yes.

Q. Okay. And were you able to figure out what this defendant's BAC would have been based on that extrapolation at the time of the crash of about 1:30?

A. Yes.

Q. And what was that?

A. .122.

Q. And in order to do this extrapolation, are you having to assume that he's in the elimination phase?

A. Yes.

Q. How long is it to -- average elimination phase for an individual?

Did I ask that a bad way? Basically how long typically does it take -- how long does it take someone to stop being in the absorption phase?

A. Oh, how long does it take for the person to finish the absorption and get into elimination phase?

Q. Correct.

A. And the maximum recorded is two hours and 15 minutes.

Q. And that's the maximum recorded, right?

A. Yes.

Q. What's the average?

A. The average is one hour.

Q. And in this case, if someone's having their last drink or says they have their last drink at about 5:00 p.m., at about 1:30 in the following morning they have to be in the elimination phase, right?

A. Yes.

Q. All right. And so the only time we'd really be looking at if they were still in the absorption period is if they were still drinking up to that -- within that two-hour, which is the maximum, or within that one-hour period?

A. Yes.

Q. Okay.

THE COURT: Is now a good stopping point?

MS. CLEMONS: Yes, Your Honor.

THE COURT: Okay. I think their lunch is here.

THE BAILIFF: All rise for the jury.

(Jury retired.)

(Lunch recess.)

THE BAILIFF: All rise for the jury.

(Jury seated.)

THE COURT: Please be seated.

DIRECT EXAMINATION RESUMED

BY MS. CLEMONS:

Q. Dr. Guale, before the lunch break, we were talking about extrapolation, right?

A. Yes.

Q. Okay. So in this case you were able to extrapolate, correct?

A. Correct.

Q. And that was -- what was the result of your extrapolation?

A. .122.

Q. Okay. And that would be for at the time that the defendant was driving at 1:31, right?

A. Correct.

Q. All right. In this case were you able to come to an opinion about whether based on his results as well as your review of the entire case whether the defendant was impaired at the time of driving?

Or, I guess, a better question is were you able to come to a conclusion whether the actions of the defendant on that night were consistent with impairment as seen on the results of his blood alcohol test?

A. Correct.

Q. Okay. And what did you base that off of?

A. With the alcohol being greater than .08 and the other -- the existence of cocaine and cocaethylene in his system.

Q. Okay. And the existence of cocaine and cocaethylene in his system, is that telling you -- the fact that we're seeing that in his blood -- that it is impairing him?

A. Yes.

Q. Okay. And we can't exactly say -- is it true that we can't exactly say which way it's impairing him, but it would be consistent based on the fact that he stated he fell asleep at the road

that he would likely be in the crash phase of that cocaine?

A. Correct.

Q. Would you be able to say is there any safe amount of cocaine or cocaethylene to be in anyone's system for it not to be impairing them while they're driving?

A. There is no safe amount.

Q. And so by the fact that cocaine is in someone's system, is it impairing them?

A. Yes.

MS. CLEMONS: Pass the witness.

MR. STEPHENSON: May I, Judge?

THE COURT: Yes, sir.

MR. STEPHENSON: Thank you.

CROSS-EXAMINATION

BY MR. STEPHENSON:

Q. Dr. Guale, in discussing your qualifications with regard to alcohol and drug impacts on the body, you said you've got training on that subject, correct?

A. Correct.

Q. One of the things that you guys do is you go to a school called the Borkenstein School, correct?

A. That's one, one is specialized training area, yes.

Q. Have you ever been to that one?

A. No.

Q. You have not.

You've done -- have you done research in the area of alcohol intoxication and drugs and the impact it has on the body?

A. I do literature searches and reviews.

Q. Okay. And are you familiar with a man named A.W. Jones?

A. Yes.

Q. He's one of the giants in the field of alcohol research. Is that fair?

A. Correct.

Q. And one of the things that he did was he wrote an article that says extrapolation is a dubious practice. Are you familiar with that article?

A. Dubious practice when it is used with less information. If you have the information that you use, it could be used. It's just when you don't have enough information that it's dubious.

Q. Okay. Well, what he says is you can never been absolutely certain a person has reached

the post absorption state, right?

A. You can based on what's on the literature. You can apply what's on the literature. If that person passed that or weighing more than that -- like, for instance, the recorded absorption time is two hours and 15 minutes. That's -- that's exceptionally long.

Q. Right.

A. But giving the benefit of the doubt, you have to use that; and, you know, if the person had a time more than that, that's absolutely fair to assume that he was in the elimination phase.

Q. So what you're saying is assuming what information you're given is true, you have to assume it's true, correct?

A. I have to assume it's true, yes.

Q. Even as improbable as it may be?

A. I don't know about that. I'm given an information. Based on that information, I perform the extrapolation because it can be performed.

Q. No training you've gotten deals with whether or not people are suspected of DWI or drinking and driving might tend to track back the time they last had a drink?

A. I don't know. That's not my job.

Q. You just take the facts that you're given and apply them?

A. Yes.

Q. Okay. Well, so, Dr. Jones says it's a dubious practice based on the lack of information. You say you have enough information here; but there's another man, Kurt Dubowski. Dubowski also says not only that it's a dubious practice but -- I want to quote him. "No forensically valid forward or backward extrapolation of blood or breath alcohol concentration is ordinarily possible in a given subject and occasion solely on the basis of time and an individual analysis result."

What information do you have here in this case? What did you base it on?

A. All the time that's given to me is there is a start time of the drink, the last time of the drink and the demographic data about the person; and from that, you know, there was almost nine hours between the stop of the drink and the analysis. So it's fair to assume the person was eliminating. So it's very clear here we can apply scientific data and just use extrapolation.

Q. All right. But what he says is you can't have a given subject and only base it on time

and individual result; and what I'm trying to figure out -- not the individual data because we know he says not a specific person, doesn't matter. All you had was the time of last drink?

A. Uh-huh.

Q. And first drink?

A. Yes.

Q. And the analysis, correct?

A. Correct.

Q. You didn't, for instance, factor in what he had to eat?

A. It doesn't matter because it's a long hour.

Q. Sure.

A. So absorption actually takes two hours because some people may eat and don't process that fast. That's why the absorption takes two hours.

Q. And that's kind of his point, though, right?

A. Yeah.

Q. Different people absorb and metabolize alcohol at different rates, correct?

A. Correct.

Q. You have to make a bunch of assumptions --

A. No.
Q. -- in order to get to this?
A. In this case, there is no assumption because --
Q. Okay. Well, you're assuming the information is truthful, correct?
A. Yes.
Q. And based on the assumption and the information you're given, there's a number of drinks that you would associate with a person who would be at this level for that three-hour window of drinking, right?
A. That number of drinking -- the number of drinks are derived from how much would the person should have consumed to reach this level at this time. So when --
Q. Right. And you're making an assumption about the amount of drinks in that particular time period, correct?
A. Right. He must have drink. You know --
Q. Sure.
A. -- alcohol doesn't come from anywhere.
Q. And for your --
A. It comes from --

Q. -- calculation to be correct, how many drinks would he have had to have in that three-hour window?

A. It says 14. 14 drinks.

Q. 14 drinks?

A. Uh-huh.

Q. In a three-hour window would have gotten the result based on your calculation?

A. Uh-huh.

Q. Okay. With regard to the cocaine that we're talking about, again, just like alcohol or any other drug, different people are impacted in different ways, correct?

A. Correct.

Q. Could have a euphoric result. Could have a dysphoric result?

A. Yes.

Q. It has different rates of elimination from the body, cocaine does, right?

A. Correct.

Q. It has different impacts on a person based on how it is used, correct?

For instance, if you ingest it via smoking it, that has a different impact than you would have inhaling it?

A. It isn't -- it's for how long you're going to feel. That's -- that's the issue. How you introduce it is determining for how long you are going to feel the effect and how long it's going to take the body to --

Q. So the length of the impact depends on how you ingest it?

A. Yes, and how much you ingest it.

Q. All of these things you don't know?

A. I don't know.

Q. So what you're saying is there's a range of possible effects, correct?

A. Correct.

Q. You can't say which one they are?

A. I can't; but according to what the -- based on this result and the metabolic profile of the cocaine, I can assume reasonably using a scientific fact that the person has started processing the cocaine. That's why you're seeing the metabolite. If you see the metabolite, that means the person has started processing and that's why the metabolite showed up and then the levels of the cocaine is waning down. It's going down. That's a small amount of cocaine that was found in his system. So it's reasonable for me to say he

could be in a crash phase.

Q. Is it frequent in science that you assume things?

A. Well, you assume things based on a scientific fact.

Q. Okay. And what scientific fact can you determine a person -- let me back up.

Every person is different, right?

A. Correct.

Q. Cocaine impacts -- I mean, running a gamut of it could be in your system, it could be impacting you for 15 minutes, it could be impacting you for 30 minutes, it could not be impacting you, it could increase your performance, perception, cognitive skills, correct?

A. In the beginning, yes.

Q. You're assuming based on the facts provided to you by the District Attorney's Office how this is impacting a person, correct?

A. Correct.

Q. With regard to your job at the laboratory, what's your title?

A. Analytical operations manager.

Q. So you're in charge of all the personnel, staffing, everybody at the laboratory?

A. Yes.
Q. How long have you been doing that job?
A. Well, since 2013.
Q. Okay. You would agree with me in blood testing it's important to have good people working at the lab?
A. Correct.
Q. It's important that you trust those people?
A. Correct.
Q. It's important that their information be accurate?
A. Correct.
Q. It's important because there's so many different people handling a sample?
A. Yeah. Depending on the case, yes.
Q. And different people rely on different people to do the job. For instance, the one toxicologist might rely on another toxicologist to do the extraction?
A. Rely means?
Q. The person who does the actual run didn't extract the sample or the specimen?
A. Could be, yes.
Q. One person may do maintenance on the

instrument that the other person uses?

A. Yes.

Q. One person may prepare the specimens to be loaded into the tray for a run that's not the one who does the run, correct?

A. Correct.

Q. One of the people who dealt with this specimen was a person named Jameaker Dumas. Are you familiar with that person?

A. Yes.

Q. Is she employed at your laboratory?

A. Not now, but she was.

Q. Okay. How long ago was she fired?

A. I don't specifically remember.

Q. Okay.

A. But --

Q. Awhile back?

A. Awhile back, yeah.

Q. Okay. And as a result of her firing, you guys did a bunch of retesting?

A. When we were requested to retest, yes.

Q. Okay. And the reason she was fired is she takes a proficiency exam, correct?

A. That's not the reason that she was fired.

Q. Right. She was fired because she got the answers ahead of time?

A. No. The reason she was fired has nothing to do with her analytical work.

Q. Okay. It had to do with her honesty?

A. I can only tell you it's not because of her analytical work.

Q. Okay. Was she truthful about the mistakes she made?

A. The mistakes she made where? I can't answer that question.

Q. Okay. You were obviously involved with her firing?

A. Involved with what?

Q. Were you involved with her firing?

A. No.

Q. In the investigation?

A. No.

Q. Okay. When you have someone who is fired from your laboratory, do you want to make sure that that doesn't happen again?

A. As far as I'm concerned, what I have, the analysts, they're analysts that perform the job in the lab. They're truthful. That's all I know.

Q. Okay. And if they're not, you don't

want them working at the lab?

A. You don't want people who are not truthful to work in the lab.

Q. And did y'all do training to make sure that this type of behavior didn't happen again?

A. Everybody does have to be ethical standards and everyone will be read that ethical standards and everyone knows what ethical standards forensic toxicologist must have and everyone complies with that.

Q. Okay. And it's fair to say that Ms. Dumas didn't meet that ethical standard?

A. I can't comment on that.

Q. But she was fired?

A. I was not involved.

Q. Okay. Even though you're in charge of the personnel?

A. Yeah, but there's higher management. So higher than I do.

Q. Oh, there is one thing I forgot to ask you about.

So making assumptions about the time of his last drink being 5:00 o'clock, right?

A. I didn't make that assumption. That was given to me.

Q. Right. But you have to operate under the information you're given, right?

A. Yes.

Q. Let's say you were given information that his last drink was ten minutes before the accident. Would it be possible that he would be in the absorptive phase?

A. Yes.

Q. And if he's in the absorptive phase, that would reduce his result rather than raise it?

A. It would reduce it.

MR. STEPHENSON: Pass the witness, Your Honor.

MS. CLEMONS: Just a few questions, Your Honor.

REDIRECT EXAMINATION

BY MS. CLEMONS:

Q. Dr. Guale, in regards to Jameaker Dumas, you weren't involved in her firing, correct?

A. No, I was not.

Q. But you are aware that it had nothing to do with anything when it comes to testing of samples in the lab, correct?

A. Yes, I know that.

Q. Okay. And, in fact, it just had

something to do with her applying for a different job, right? If you're aware.

A. Something to do with what?

Q. Her applying for a different job, something in an interview, correct?

A. I -- I can't comment on that.

Q. Okay. But if it had something to do with the way she analyzed something or anything like that, you would know, correct?

A. If it was -- if she was involved with anything analytical, yes, I would be involved.

Q. And you don't know anything about that, so we can assume that she -- it had nothing to do with anything for testing?

A. I can assure you there's nothing related to her laboratory work.

Q. And Defense counsel had mentioned that when y'all were requested, y'all did go ahead and retest some samples. Did that have to do with the availability of her testimony?

A. Yes. The reason that we are retesting it is because she's not available to testify.

Q. Did it have anything to do with the accuracy of those results?

A. No.

Q. In this case as part of your job, you reviewed all of the procedures done in this case and the testing in this case, right?

A. Correct.

Q. And did Ms. Dumas have anything to do with the testing in this case?

A. No.

Q. Okay. Do y'all have -- I guess the best word I can give is fail-safes at the -- in the lab when it comes to testing to make sure all of the procedures are correctly followed and y'all are testing the correct blood?

A. Yes.

Q. And what are those procedures?

A. We -- we keep the chain of custody, electronic chain of custody that by of the samples tested, when they were tested, when they were under custody of somebody or whoever is the analyst and when the testing was done and then when, you know, the testing was recorded. So all that is included in our chain of custody electronically.

Q. And you review that, correct, before you sign off on any lab report?

A. Correct.

Q. And if something was wrong or something

had been not done correctly, you wouldn't sign off on that lab report?

A. No, I would not.

MS. CLEMONS: Okay. Nothing further, Your Honor.

MR. STEPHENSON: Just briefly, Judge.

RECROSS-EXAMINATION

BY MR. STEPHENSON:

Q. Dr. Guale, have you ever testified that one of your laboratory tests was bad, was incorrect, was inaccurate?

A. Have I ever testified on a result that's inaccurate?

Q. Right.

A. No.

MR. STEPHENSON: Nothing further, Judge.

MS. CLEMONS: Nothing further.

THE COURT: Okay. Thank you, Doctor. You may step down.

May she be finally excused?

MS. CLEMONS: Yes, Your Honor.

MR. STEPHENSON: She may, Judge.

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THE STATE OF TEXAS :

COUNTY OF HARRIS :

I, LINDA HACKER, Official Court Reporter in and for the 177th District Court of Harris County, Texas, do hereby certify that the above and foregoing contains a true and correct transcription of all portions of evidence and other proceedings requested in writing by counsel for the parties to be included in this volume of the Reporter's Record, in the above-styled and numbered cause, all of which occurred in open Court or in Chambers and were reported by me.

I further certify that this Reporter's Record of the proceedings truly and correctly reflects the exhibits, if any, admitted by the respective parties.

I further certify that the total cost for the preparation of this Reporter's Record is $_____ and was paid or will be paid by Harris County.

WITNESS MY OFFICIAL HAND on this the 12th day of September, 2016.

/s/ Linda Hacker
LINDA HACKER, CSR No. 4167
Expiration Date: 12-31-16
Official Court Reporter
177th District Court
1201 Franklin, 19th Floor
Houston, Texas 77002
713-755-6332

THE WITNESS: Sure.

THE COURT: Then we'll address that issue.

THE WITNESS: Thank you.

MR. SCHNEIDER: Dr. Guale is our next witness.

THE COURT: Okay.

MR. SCHNEIDER: But we'd like to get him back to --

THE COURT: Well, I know; but we'll talk about it when we take a break. So, who's next?

MR. SCHNEIDER: Dr. Guale.

MS. LOGAN: May we approach, Judge? No, Judge. I'm sorry. I withdraw my request to approach.

THE COURT: Right this way, ma'am. Raise your right hand to be sworn.

(Witness sworn.)

THE COURT: Have a seat.

Mr. Barnett.

FESSESSEEWORK GUALE,

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

Q. (BY MR. SCHNEIDER) Would you please state your name?

A. Fessesseework Guale.

Q. And if you could, please spell your last name?

A. G-U-A-L-E.

Q. And, Doctor, would you please tell the ladies and gentlemen of the jury what you do for a living?

A. I am a -- right now I hold a position in the Institute of Forensic Sciences as an assistant chief toxicologist.

Q. And tell us about your educational background as it pertains to your current job.

A. I earned my Doctor of Veterinary Medicine Degree and I earned my Master of Science Degree in Toxicology and I am a board certified forensic toxicologist.

Q. Now, as it pertains to -- how long have you been a toxicologies?

A. Twenty years.

Q. And just in a -- what is a toxicologist?

A. A toxicologist is a person who's studied about the effects of drugs and other poisons and chemicals on the human body. It deals with how the drug or the toxins process in your body. And once it's processed in your body, what kind of effect it

causes to your body or what that poison do to your body. That's the study we call "toxicology."

Q. Now, on this particular case, you did not do the toxicology report or the toxicology analysis of Joel Avila, did you?

A. No.

Q. But you've done -- you have reviewed those records, haven't you?

A. No. I did not review any of these records at that time when we have this data.

MR. BARNETT: May I approach, your Honor?

THE COURT: Yes, sir.

Q. *(BY MR. BARNETT)* And I believe it is -- I believe it's State's Exhibit 99. It is. And, Doctor, I want to hand you what's already been admitted into evidence which is State's Exhibit 99. And this is an autopsy report of a Joel Avila. And if you -- and go ahead and look at whatever you like. The last page is the toxicology report.

A. Yes.

Q. I'd like to direct your attention to that. And please take a moment to review it, if you would.

A. *(Complies.)*

Okay.

Q. And I'd like to display the last page, if I could figure out how to work this.

MS. LOGAN: Just put it on there.

MR. BARNETT: It's on?

MS. LOGAN: Yes.

Q. *(BY MR. BARNETT)* Doctor, I'd first like to direct your attention to the ethanol in this case. And looking at the last page of State's Exhibit 99, the .10, is that grams per -- what does "D.L." stand for?

A. It's grams per deciliter. A deciliter is hundred milliliter.

Q. What can you tell us about a person who has that level of ethanol in their blood?

A. Well, this is a level which is above the legal limit, which is 0.08. That means at that level, a person should not operate a motor vehicle.

Q. And let's move away from operating a motor vehicle. How much alcohol -- let's say a person weighs between 145 and 150 pounds. How many beers would a person have to consume in one hour to get their ethanol level up to a .10?

A. Well, there are so many factors involved. You know, you cannot just come up with a simple calculation like that because there's an issue of

absorption, there's that -- like you said, the person's weight and height, whether there's food, if he was drinking with food or it's an empty stomach, or how long it takes to get to this level. It's so variable. So, that's not a simple calculation you can do unless you have the facts.

Q. You would need to -- because if a person has a full stomach, it's going to take longer for it to absorb into their bloodstream?

A. Yes. Yes. That affects the absorption. So, it takes longer. So, if it is an empty stomach, it gets absorbed faster. So, there are so many other factors. You know, what kind of drink. The type of the drink matters. And whether -- how many -- you know, whether the drink has got sugary substance in it or a hard liquor also matters. So, there are so many factors that you cannot just simply calculate that.

Q. Is it possible without affecting the integrity of your answer to give us a ballpark figure of how many beers in an hour it would take for a man, 145, just ballpark, give or take, a man 145 pounds to consume in one hour to achieve this level?

A. From five to six beers.

Q. And that would have to be in an hour,

correct?

A. Yes.

Q. And then after that hour, you would do what's called "eliminate" so much of that alcohol level per hour, wouldn't you?

A. Yes.

Q. And would it be safe to say you would have to drink at least, say, one beer per hour to offset the amount of alcohol you were eliminating per hour?

A. It can -- yeah, it can happen that way. Or it may be either more hours it may take to eliminate it or more hours takes to absorb it. Like, it's all conditional. We're just giving you just a ballpark of it.

Q. It can fluctuate a lot.

A. It can really, really fluctuate a lot.

Q. But basically somewhere in the ballpark of five or six beers to get there?

A. Yes.

Q. Now, what is -- going to the second line in this report, the coca -- could you pronounce that word for me?

A. Cocaethelyne.

Q. All right. Thank you.

A. In other words, it's ethyl cocaine.

Q. What can you tell about the .10 milligrams per liter of cocaethelyne?

A. The presence of cocaine -- as I said, cocaethelyne is ethyl cocaine. This is produced by the presence of both ethanol and cocaine. If you just do only cocaine, you would not see cocaethelyne. So, that indicates -- this cocaethelyne is produced by combination of ethanol and cocaine.

Q. After the two substances are consumed?

A. Taken together.

Q. And does that have -- is that a byproduct?

A. Yes.

Q. And does this byproduct have an effect on the human body?

A. Yes.

Q. And what type of byproduct does that have?

A. It is active and if you have both ethanol and cocaine together and you will have a very high or intense euphoria than you would have separately. So, the fact that having that together makes a person feel more euphoric.

Q. And does that have them -- does that move them more away from the way their mind would normally be?

A. Usually, yes, these are mind-altering

compounds. Both alcohol and cocaine would affect your mental ability.

Q. Now, moving down to the next line, the .17 milligram per liter of cocaine. What can you tell from this result?

A. Well, the person was doing cocaine.

Q. Is that a high level of cocaine?

A. Yes.

Q. And when you say "high level," what do you mean by that?

A. Well, it's a level you can get it with repeated usage.

Q. You mean there's a buildup?

A. Yes, it's a buildup. Or sometimes you can get one time; but, you know, it's a big dose. It could be a one-time big dose or repeated small doses.

Q. So, in your professional opinion, did this person -- to achieve the .17 milligrams per liter of cocaine, did this person consume large quantities of cocaine?

A. He might have consumed large quantities of cocaine at once, or he might have done it in small amounts repeatedly. It can happen both ways.

Q. And in your professional opinion, would a person with this level of cocaine be not acting

normal?

A. Yes.

Q. And this person would be very stoned, if you will?

A. Well, there are different levels before that -- if you -- stoned means -- that means you are not you -- you know, you're not aware of your surroundings, right?

Q. Correct.

A. Am I using the right terminology here for stoned?

Q. Well, I'm not sure that's a medical term.

A. Well, I'm trying to come up with, you know, best understandable term. So, if you're stoned, that means you're not aware of your environment. Yes, you can get to that level with this amount of cocaine.

Q. And, Doctor, is it considered dangerous to mix alcohol and cocaine in the same person at the same time?

A. It increases the danger, yes.

Q. Okay. And tell us what -- now, the next level down on the chart -- well, I guess there's -- what is that word?

A. The non-detected? Oh. Benzoylecgonine. Sorry.

Q. Yes.
A. Yes.
Q. Tell the ladies and gentlemen what that is.
A. That's what the cocaine changes into. Like I said earlier, when you take drugs or any medication, your body process it to another compound. It will either process it to inactive compound or more active compound. So, this is inactive compound that's metabolized from cocaine. So, this is in a form that should be excreted out of your body.
Q. Okay. So, this has already been, say, processed through the body?
A. Yes.
Q. And does this tell us that the person -- what does this tell us about their cocaine use in the several hours prior?
A. Well, the amount -- you can see the amount and you can tell that, you know, this person has been, you know, taking cocaine for a little bit longer time because it accumulates because it does not come out of your body that fast, as fast as the cocaine does. So, it stays in your system longer. So, the more amount you have this in your system, that means the more cocaine you have had before.
Q. All right. So, if I'm understanding you

correctly -- and correct me if I'm not -- this person has done a heck of a lot of cocaine that this test was run on? Is that -- would you consider that a true statement?

A. I can say this person has done cocaine either repeatedly for the last five, ten hours or he took one bolus or big dose.

Q. Short in time before he was tested?

A. This test was done after the person died, and this is because this is a post-mortem sample.

Q. Okay. I guess -- now, another thing that -- would you -- what happens -- if a person ingests cocaine and then they die and then they are tested sometime after death, can the level of cocaine come down during the time in which they are deceased?

A. That all -- cocaine is -- it's known that it's unstable. After death it may go spontaneous hydrolysis. And depending on how long the person has been dead and when it was autopsied and sample was collected, the time matters and how much cocaine is lost during that time and also whether that person or the body was refrigerated or was it, you know -- the temperature where the body was also matters. And there are so many factors that play there as to how much cocaine was lost while the person was dead

between the death and the autopsy.

Q. So, in other words, when was this test done? Can you tell by looking at these records?

A. The date it was received was 12/18/2007.

Q. Now --

A. I don't know the time of death. All I know is when we received the sample.

Q. All right.

A. Okay?

Q. If the -- hypothetically speaking, if this person died around 6:00 a.m. on February 16th, two days before -- December 16th of 2007, is it possible that the levels of cocaine are lower at the time of test than they were at the time of death?

A. It depends how the body was preserved. I have no idea how the body was. And like I said, you know, there are earlier points that you have to consider between the time of death, when the person dies, how was his body preserved. You know, if he was preserved before the autopsy and the autopsy is done and as soon as the autopsy is done, we preserve the samples right away. They are refrigerated. So, if it's a body that has been laying out for a long time before somebody noticed it or before somebody knows what time they're dead, there's a time gap

there that you don't know what happens at that time.

Q. So, you would need more information?

A. *(No response.)*

Q. Is that -- you would need more information to answer that question?

A. Yes. Yes.

Q. Doctor, is it -- having reviewed these levels of alcohol and cocaine and the byproduct cocaethelyne in this person, based on your studies and your experience in this area of toxicology, do these levels -- can they tend to make a person more aggressive and more violent than they normally would be?

A. They tend to make you aggressive. That's one of the side effects of cocaine is, you know, you become agitated and aggravated and become violent. But that also depends on how you -- are you experienced or not. You know, that may happen to people who does not do it so often. Or chronic users may not do that because, you know, their body adapted it. So, there's also another factor. But it's a common fact that, you know, cocaine makes you violent.

Q. And as you said before, getting back to you saying this could have been a large dose, when you

say "large dose," what amounts are you talking about?

A. I don't know. I just -- I don't know how people -- I don't use cocaine so to tell you how much. So, you know, I can tell you what experimental -- experimentally how much in grams. But that doesn't mean anything how much that is. So...

Q. Could these levels of -- we talk about cocaine and alcohol together can make you aggressive and violent. Could these levels make a person aggressive and violent?

A. Depending on the person. It could or could not.

Q. Now, you also have -- you're familiar with marijuana, aren't you?

A. Yes.

Q. And based on your studies, does marijuana make a person aggressive?

A. No.

Q. And when you say "no," what does it do?

A. Well, marijuana is a kind of substance that gives you a high, like this one; but it make you -- it's a hallucinogenic compound that, you know, you will have hallucinations and you will have paranoia and you will have -- actually when you do -- when you

are paranoid, you tend to be, you know, hiding from somebody. Somebody's coming to kill you and those kind of thoughts. You know, you would be afraid of people and start segregate yourself somewhere and stuff like that. It does not give you the aggression like the cocaine does.

Q. And, so, does it make a person mellow?

A. I think given time they may be active because they feel about themselves that they are on high; but, you know, they would not be as aggressive -- they would not be aggressive or aggravated that much, you know, to be violent like cocaine does.

Q. And are you familiar with MDMA?

A. Yes.

Q. And is that commonly called "ecstasy"?

A. Yes.

Q. And are you familiar with the effects of ecstasy or MDMA on a person?

A. Yes.

Q. And tell the ladies and gentlemen what effects ecstasy has on a person as far as being aggressive or nonaggressive.

A. Well, ecstasy and cocaine, they do have similar kind of, you know, mechanical action in the

body, how you get with MDMA. And these are all central nervous system stimulants. They stimulate your brain. You become hyperactive. You know, especially in MDMA cases, you would have a distorted perception of your surrounding. And what it does is, you know, you would be more actually inclined to be positively affected. Your mood -- your mood would be positively affected. You want to talk too much and you want to get very affectionate with other people, you know, because you have a perception, a feel good perception around you. Even though it is the same as cocaine as being, you know, central nervous system stimulant, the way you're acting is completely different.

Q. And I guess hence the name, ecstasy?

A. Uh-huh.

Q. And, so, that makes people just real happy about all their surroundings?

A. Yes. They do feel happy and affectionate. You know, they just want to communicate more, to be more friendly, and feel good about themselves, too.

Q. And not aggressive?

A. No.

Q. Doctor, reviewing the toxicology report, there are three different types of cocaine products

in this person's body; is that correct?

A. Correct.

Q. And that would be the -- one, the cocaine itself, correct?

A. Correct.

Q. Two, the byproduct of cocaine and alcohol?

A. Cocaethelyne.

Q. And, three, the -- kind of the used cocaine?

A. Benzoylecgonine, yes.

Q. And does the fact that there are three different byproducts -- or there's cocaine in two byproducts; is that right?

A. Yes.

Q. Does that indicate three different usages of cocaine?

A. No. It's only one use.

Q. That could all be used at one time?

A. Yeah. Remember, all these three -- we are detecting cocaine. Cocaine was what is ingested, or the cocaine was what was snorted or smoked or injected. You know, four different ways. That's one product that was injected. But the body changed it into two different metabolites. One is a cocaethelyne, which is the metabolite that's formed

between alcohol and cocaine. And the other one is that was derived from cocaine itself and become inactive. So, the product is only one here. And the alcohol is another one. Alcohol and cocaine were ingested. And now we have four products, the four different products that we saw in the blood.

Q. After it's processed by the body?

A. Yes.

Q. Thank you, Doctor.

MR. BARNETT: I pass the witness, your Honor.

THE COURT: Anybody need a break at this time? Everybody okay for, like, another 15 or 20 minutes or so? Okay.

MS. LOGAN: I'll be quick.

THE COURT: Okay.

MS. LOGAN: May I proceed?

THE COURT: Yes.

CROSS-EXAMINATION

Q. *(BY MS. LOGAN)* Good afternoon, Doctor.

A. Good afternoon.

Q. I want to talk to you about some of the things that you've just testified to. Is it possible for you to look at the results here and tell us how many times or at what time cocaine was ingested into

the body of this person?

A. No.

Q. And is it possible without more information to tell us whether he did 2 grams of cocaine or a half a gram of cocaine based on these numbers?

A. No.

Q. Okay. Now, I want to talk to you about a substance known as ecstasy. Is that something that falls within the group of amphetamines?

A. Yes. It's a derivative of methamphetamine.

Q. Okay. And is it sometimes referred to as a designer drug?

A. Yes.

Q. Okay. Can you tell the ladies and gentlemen of the jury what that means to you?

A. Well, ecstasy was derived from methamphetamine. Methamphetamine was original compound. By just adding a methoxy group on the methamphetamine --

THE REPORTER: A methoxy?

THE WITNESS: Methoxy group. It's a chemical. It's a chemistry.

A. So, it's a group of -- a chemical group that's added on the methamphetamine to make it methylenedioxy methamphetamine.

Q. (BY MS. LOGAN) Okay. And that's where we get the MDMA?

A. Yes, methylenedioxy methamphetamine.

Q. Okay. And we're still talking about ecstasy, right?

A. Yes. That's the street name for meth -- MDMA, yes.

Q. Okay. Great. And are you familiar, based on your experience and studies into the effects of controlled substances on the body, that it is described as creating a sense of euphoria?

A. Correct.

Q. Okay. And it's also described as creating a sense of intimacy and love?

A. Correct.

Q. Also among the effects are that it diminishes a person's anxiety?

A. At a certain stage, yes.

Q. Okay. I'm sorry? I missed that.

A. At a certain stage, it would.

Q. Okay. At a certain stage of --

A. Yeah.

Q. -- metabolisis [sic]?

A. Yes.

Q. Okay.

A. Well, there are -- you know, when the drug is introduced. And then there are so many processes. At a certain stage of that process, it would happen.

Q. Okay. And the description of sort of an inner peace or self-acceptance is something that you hear associated with ecstasy?

A. Yes. Because it's -- it's a mood-altering compound in a positive way.

Q. Okay. And can it also at some point during the point at which it's been ingested cause aggression, hostility, or jealousy? Are those also things that are described by users of ecstasy?

A. Well, maybe when you're at the end of probably, you know, when you are feeling that way and, you know, you may feel rejected in way you are acting, you know, acting out. If somebody -- if you feel that you're rejected, you may feel that way because at that time you have a good perception of yourself and good perception of the other person or your surrounding. So, it can cause that.

Q. Okay. And, in fact, are you aware of studies that have been done that indicate a clinical use for ecstasy to help people discuss anxiety-provoking events?

A. Yes, psychotherapy.

Q. Okay. So, in other words, ecstasy is something that can be taken under the direction of a doctor to assist a person in talking about things that make them anxious?

A. Yes.

Q. Are you also aware that ecstasy increases a person's energy and endurance?

A. Yes.

Q. Okay. And is that part of the stimulant nature of the --

A. Because, yes, all the stimulants, central nervous system stimulants do have that property.

Q. Okay. And, so, you're, likewise, aware of it reducing a person's sensitivity to pain?

A. To certain degree, yes.

Q. Okay. And again that's a portion of the stimulant --

A. Yes.

Q. The nature of the stimulant?

A. Uh-huh.

Q. Okay. And now I want to talk to you about some to the aftereffects of ecstasy or MDMA. It can cause anxiety and paranoia, right?

A. Yes.

Q. It can cause hallucinations?

A. Correct.

Q. It can cause delusions?

A. Correct.

Q. It can cause memory impairment?

A. Correct.

Q. And based on your study in this area and your experience as a toxicologist, can you tell us whether or not you would expect to see at least some of those things we've just discussed if a person were to take three ecstasy pills in a 24-hour period?

A. That, you know, vague question again. Because what kind of pills? You know, how much is in a pill? You know, you counted three; but how much is in a pill really?

Q. Okay. I'm sorry. I didn't mean to be vague. Is there a certain dosage that you commonly see with respect to ecstasy?

A. On this I see, you know, what amount in the blood, it cannot tell you that.

Q. Okay.

A. All we know is, you know, how much of the concentration of that MDMA in the human body would cause the effect of all that we talked about. Right now I cannot tell you that.

Q. Okay. And can you tell us what the rate of

metabolizing ecstasy is in the human body?

A. You want me to compare it to cocaine or?

Q. Sure. Sounds good.

A. Okay. Well, we -- the rate of the metabolism usually you do, you know, like narco-kinetic studies. You do, you know, half-life. You know, what's the half-life of a certain amount of drug. That means when you say "half-life" and how -- how long does a body take or does it take for the body to process half of the drug. That's called "half-life." So, when you consider a half-life, it's -- cocaine does have a very short half-life, and ecstasy has a very long half-life, you know, as compared to one to ten.

Q. Okay. So, is it fair to say that the body will metabolize cocaine faster than it metabolizes ecstasy?

A. Yes. So, that means, you know, if you take the same amount of drug, like the same amount of cocaine and ecstasy, the ecstasy would stay in your system longer.

Q. Okay. And would that likewise result in you feeling the effects of the ecstasy longer than you would the effects of the cocaine?

A. Correct.

Q. Hypothetically speaking, if a person were to, let's say, at 5:00 o'clock p.m. take one ecstasy pill and let's say three hours later at 8:00 o'clock take another ecstasy pill, would it be possible for that person to experience both the euphoric experience of the initial ingestion of the pill as well as the after-life type -- not afterlife -- aftereffect. We're not going to get that deep. So -- okay. Let me try that again. If you were to take two pills at two different times, is it possible to experience both the aftereffect from the first pill and the initial euphoria of the second pill at the same time?

A. Well, the thing is you cannot have two different feelings at the same time. Okay? You have to have one feeling at a given time. So, without knowing, you know, how much is in that pill and without knowing -- you know, without knowing how much is in that body, in somebody's system, it's very hard to say whether he was feeling the downside effects or the upside effect. And then when you look at those effects, they criss-cross each other, really. You know, at certain time you are feeling high and affectionate; and then after awhile when the drug wanes, you know, you feel down and then you feel

rejected stuff, you know, during the dysphoric phase. You come to a dysphoric phase. So, it's very hard to say, you know, so, at this time he was feeling this and he took this and at this time he was feeling that. It's very hard to put a demarcation like that because it's a feeling. So, nobody even -- you know, experimentally, you know, we can't measure that unless, you know, there's an outward effect that, you know, a person can see, me and you can see.

Q. Okay. And would you agree with me, Doctor, that you would be -- you could be equally aggressive if you combined cocaine and alcohol as you could be if you combined ecstasy and alcohol?

A. Aggressive? And it also depends, you know, how much alcohol is in your system. And usually, you know, the alcohol in the beginning would, you know -- you would be feeling the more euphoric effect with the ecstasy. And then it also depends -- again this is just, you know, a vague question. You know, I can't put my hands in there.

Q. Okay.

A. Really, you know, I can't say.

Q. Okay.

A. So -- but, you know, when you say "aggressiveness," usually does not go with ecstasy.

Q. Okay. Fair enough. Now, can you tell me what, if any, effects you would expect if someone were to combine alcohol, ecstasy, and marijuana?

A. See, there are -- these are three different property drugs. One is a central nervous stimulant. One is a central nervous system depressant. And the other one is a hallucinogenic drug. At a given time you may feel high; and at a given time you, you know, one would kick in and you may feel low. At another time one would kick in and you become paranoid. So, it's really a -- the person who is taking it can tell you that.

MS. LOGAN: I'll pass the witness.

THE COURT: Anything else?

REDIRECT EXAMINATION

Q. *(BY MR. BARNETT)* Doctor, combining alcohol, marijuana, and MDMA, ecstasy, I just want to ask you about -- the Government lawyer, Ms. Logan, asked you about if that would make you aggressive. And it was unclear to me, your answer. Do those three combine to make a person aggressive?

A. That's what I am trying to explain to you. Like the central nervous system stimulants -- like ecstasy and cocaine are central nervous system stimulants. At a given time, you know, it would give

you the urge to be aggressive. But there's also an alcohol there. Why is people taking alcohol and other drugs? To mellow themselves from getting into, you know, the dangerous effects of one from the other. So, clearly -- and we're talking about doing it together or in separate time. And in a given 30-minute hour, a person can change sentiment 30 times. You see what I mean? It can, one, be aggressive at one time. One be, you know, mellow. Can be talkative. It can be, you know -- depending on at what stage of the body processes it's going to be. These are three different action drugs.

Q. Okay.

A. Three of them have got three different effects.

Q. And I'm not talking about cocaine. I'm talking about the ecstasy, the alcohol. Excluding cocaine, do the other three make you aggressive at any point?

A. Okay. Let's explain about aggression. What is -- when you say "aggression," what is it that you want -- you want to make a statement by saying the person is aggressive, you know. When some people talk, they talk aggressively, right?

Q. Correct.

A. Let's go to the word and explain that. Because, you know, we don't want to say things that are not true here just based on, you know, aggression. You know, when you are feeling high, for instance, some people feel high and express themselves really strongly or aggressively. And is that what you call, you know, "aggressive" or "aggression"? Or in regards to, you know, making that aggression into violent behavior, which one are we talking about here?

Q. Let's talk about --

A. It could be aggression about, you know, feeling good kind of aggressiveness, you know. Going forward and outward. You know, somebody who is not talking or who is shy can get aggressively talkative by just taking ecstasy. Okay? I'm trying to make, you know, everybody aware that what we're talking about when you talk about aggression, yes, it can cause aggression, but at what level of aggression?

Q. Can we -- in response to that, can we, say, move into violence? Does ecstasy make someone violent?

A. I don't know. I haven't heard ecstasy making anybody violent, or I did not see any reports that ecstasy making somebody violent.

Q. And you've done studies in the effects of ecstasy on the human body, haven't you?

A. I have read it. I did not do the studies. I have read about them.

Q. And none of those studies said ecstasy makes a person violent, did they?

A. I did not see any pertaining to violence. Aggression, yes, but not violence.

Q. Doctor, the prosecutor asked you about ecstasy affecting a person's sensitivity to pain.

A. Uh-huh.

Q. I want to ask you about cocaine. Can a -- and let's take a person with this amount of cocaine in their blood, the .17 milligrams per liter.

A. Uh-huh.

Q. Based on your experience and your studies, is it possible that this person would not be as sensitive to pain as a person who did not have cocaine in their system?

A. I can't put anything about pain with a level. I cannot associate pain and a level of cocaine in a person because that's all subjective.

Q. Have you done any studies on or read or researched on how a person reacts to violence that is on cocaine?

A. How a person -- can you state that question again?

Q. Well, have you studied how cocaine relates to violence?

A. How cocaine cause the violence?

Q. Correct.

A. You know, the outward symptoms and they get paranoid and they get very energetic, you know, unbelievably very highly energetic and they feel like nobody can touch them and they, you know, thrash around whatever they saw and they're very aggressive and they become violent that way. And that's what it does to you by going through mechanisms in your body. That's already a known fact.

Q. And would a person who has ingested, hypothetically, this .17 milligrams per liter of cocaine, would this person -- is it possible, based on your studies, would they be -- in their violent behavior, would they be able to take on more injury than a person without cocaine in their system?

A. Would they be able to take more injury means what?

Q. Well, would they --

A. Without feeling pain?

Q. Correct.

A. They could.

Q. And is that something that you've learned in your studies?

A. Well, it's been said that they don't feel that much pain. So, that's what it means. In other words, what you described to me is they may -- you know, if somebody hit them for instance or punch them, for instance, you know the degree of pain they may feel may be less. That's what it means.

Q. So -- and that's what I'm getting at. So, a person who has, say, a .17 milligrams per liter of cocaine could possibly take a punch and still stand up whereas a person who did not have cocaine in their system couldn't?

A. Like I said earlier, I mean, this vial that we got in there does not tell me whether that person is going to endure pain or not. I cannot associate that with the level that we see in the blood. But it's a known fact, you know, from reports in other studies that people on cocaine, regardless of the amount in there, on cocaine they may feel less pain than other normal people who did not do the drug. That's the general statement. It has nothing to do how much it has to be in the blood for a person to feel pain or not to feel pain. There's no study that

I read, at least, to associate numbers in the blood or the levels in the blood with feeling pain or not. That's what I'm trying to say.

Q. You're just talking generally.

A. It's generally, yes. Generally it's been said or it's been -- you know, people that have had that kind of experience have come and said that, you know, they feel energetic and, you know, they don't feel pain. And that's recorded on several papers.

Q. They have that bullet-proof sensation?

A. I don't know if you call it "bullet proof." I don't know.

Q. Okay. Doctor, I appreciate it.

MR. BARNETT: I pass the witness, your Honor.

THE COURT: Anything else, Ms. Logan?

MS. LOGAN: Just briefly, Judge.

RECROSS-EXAMINATION

Q. *(BY MS. LOGAN)* Doctor, with respect to what we referred to as designer drugs, including ecstasy, can you tell me whether or not, to your knowledge, they vary in their content as far as --

A. You mean the tablet?

Q. Yes.

A. Yeah. You know, these are designer drugs.

They are made somewhere else. Nobody knows how much is in there. So, they vary. We believe they vary.

Q. Okay. So, there's no, like, F.D.A. approval on a --

A. No, these are --

Q. -- baggy of ecstasy, right?

A. No.

Q. All right. And, so, they can vary with respect to the contents and what that particular pill might cause; is that correct?

A. Correct.

Q. And have you ever heard of a bad trip or a bad ecstasy trip in your experience as a toxicologist?

MR. BARNETT: Objection. Relevance and outside the scope of the evidence.

THE COURT: Overruled.

Q. *(BY MS. LOGAN)* Have you ever heard that before, that phrase?

A. Yeah, I have heard the phrase.

Q. Okay. And in your experience, that relates to a person that took an ecstasy pill that didn't have the anticipated effect?

A. Uh-huh.

Q. Is that right?

A. Correct.

MS. LOGAN: I'll pass the witness.

MR. BARNETT: No further questions.

THE COURT: Thank you, Doctor. You can step down.

May this witness be excused?

MR. SCHNEIDER: She can be excused, your Honor.

THE COURT: Any objection?

MS. LOGAN: No.

THE COURT: Ma'am, you're free to go and released.

Folks, we're going to take just a short break and then come back and work until about 5:00, maybe 5:15 at the latest. So, just take about ten minutes.

Lawyers, let's talk for a second about Dr. Ferrara.

(Jury leaves courtroom)

(Recess taken)

THE COURT: Go ahead and bring them out.

(Jury enters courtroom)

THE COURT: Be seated, please.

Please call your next witness.

(Jury enters courtroom)

THE COURT: You may be seated, guys.

Welcome back. Hopefully -- you can be seated -- everything will -- we'll get this thing wrapped up today.

The State had rested.

The Defense, you're up. Call your first witness.

THE DEFENDANT: Your Honor, I call Dr. Guale to the stand.

THE COURT: Okay.

THE DEFENDANT: Has she already been sworn in?

THE COURT: Not yet.

Come on up.

THE WITNESS: Good morning.

THE COURT: Good morning.

(Oath administered to the witness)

THE COURT: Please come up and have a seat. Pull the microphone up to you. Speak clearly.

Defense, you may begin.

DR. FESSESSEWORK GUALE,

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY THE DEFENDANT:

Q. Good morning, Dr. Guale.

A. Good morning.

Q. I want to ask you a few questions that Mr. Salazar yielded to you and said you would have better knowledge of today. So some may seem a bit incomplete, but at some point he stopped and said you would be the person to speak with about this particular topic.

A. Okay.

THE COURT: Why don't you let the jury know who she is?

THE DEFENDANT: I'm sorry?

THE COURT: Why don't you let the jury know who she is?

THE DEFENDANT: Dr. Guale? Oh.

Q. (By The Defendant) Dr. Guale, you would be the head forensic --

THE COURT: Again, that's leading.

Q. (By The Defendant) Dr. Guale --

THE COURT: Why don't you ask --

Q. (By The Defendant) Dr. Guale, what is your role

at the -- where do you work, Dr. Guale; and what is your title?

A. I work in the Harris County Institute of Forensic Sciences, toxicology department.

THE COURT: Let the jury know a little bit about her qualifications.

Q. (By The Defendant) Please, Dr. Guale, tell the jury your qualifications, how long you've been on the job, and your experience and background.

A. I have been in the institute for the last eight years, and I hold several different positions. I was a Toxicologist 2 and a Toxicologist 1, which is a manager. Right now, I am the codirector of the laboratory and, also, the toxicology analytical operations manager. I have a total of 23 years of toxicology experience. I hold a doctorate degree and a master's degree in toxicology.

Q. Thank you, Dr. Guale.

Now, yesterday, we were made aware that there's a toxicology manager. Is that correct?

A. Correct.

Q. Now, would that toxicology manager be at the top of the chain for making decisions as to how blood is analyzed and in what way?

A. Yes. I am the one who makes the decision,

because I am the analytical operations manager. So I oversee the operation -- the day-to-day operation of the laboratory in that regard.

Q. Okay. So can you tell us how you decide which type of test to apply to certain blood samples in a --

A. We have two different source of samples. One is a postmortem toxicology that comes from the medical examiner, and the other one is DWI and cases that comes from the law enforcement agencies around here, the Harris County Sheriff's Department and other precincts. And when a DWI panel was requested, we started with the alcohol testing; and then if the alcohol testing is above a 0.17 and above, then we conduct other more testing. If it is above 0.17, that will be the only result it will send out.

Q. Dr. Guale, can you discuss with us -- is it pronounced glycolysis? I'm not sure. That was a term that may have been used yesterday by Mr. Salazar. Does that sound correct?

A. Say that again because there are so many words like that.

Q. I believe he may have said glycolysis? That's why I wrote it down because I didn't remember what -- does that --

A. Glycolysis? Is that what it is? Glycolysis

means, you know, breakdown of glucose --

Q. Okay.

A. -- in short.

Q. Now, I don't believe he elaborated on that; so how does that relate to blood testing?

A. Nothing, really. It's not related to blood testing at all. It just depends on the concept of what was being said. What was the question that raised that?

Q. Okay. It wouldn't have been my question, so I just put that word down to ask you about it today. So I'll move on.

Okay. We talked a little bit about sodium fluoride --

A. Yes.

Q. -- and the presence of it within the vials for blood testing that come already -- when they come to you, it's already with the sodium fluoride in the bottle?

A. Yes.

Q. Is every type of vial always filled with that sodium fluoride first, to your knowledge, always?

A. Not all of them but all gray topped tubes do have the sodium fluoride in them and it's standard protocol for collecting blood in that tube when it comes to, you know, alcohol analysis and drug analysis.

Q. So, when the testing is done on the blood, is there some sort of chemical strain or something that shows that both the sodium fluoride is in there, as well as the ethanol, that you can actually pull out and distinguish that sodium fluoride is there as well as the ethanol? How does that work?

A. The alcohol testing only tests for volatiles and ethanol and the other volatiles that can be there. But it does not test for sodium fluoride because it's given, it's there. We see it is there because it's a smooth blood and we know it is a gray topped tube and it's on the tube, it says it's added sodium fluoride in there so we don't need to check that.

Q. And does sodium fluoride hold its effectiveness indefinitely?

A. Of course, yes.

Q. It does? Now, what type of -- how does one know that it does hold its effectiveness, in terms of stabilizing the blood indefinitely? How does one know that?

A. Well, one, there has been studies that has been done with its potential to keep the blood sample as is, preserving it as is. That's why it's called preservative.

And, two, if it's not functional, then you

would see -- like, for instance, we check blood samples, sometimes we get a retest after two years. And then the blood alcohol level come back right on. So even that, you know, it's my experience that I can attest that it would keep it preserved indefinitely.

Q. And so, conversely, if you were to test a sample two years later, could the opposite have happened, that the number changed very drastically?

A. It could change at a lower. It would decrease because, you know, when you open a sample several times, it may decrease the amount because on top of the tube, the alcohol may be getting in there. So when you open a tube, like, for instance, for other analytical runs and then it would evaporate so it would -- if we check it this time, it comes, like, for instance 0.1, two years later, it would become 0.09 or lower than that. That is the effect, lowering effect.

Q. So the number of times a vial is opened affects the results of the analysis; is that correct?

A. It would decrease it, uh-huh.

Q. To your knowledge, how many times were each of those two vials opened?

A. In this particular case, those two vials has been opened only once because one tube was screened; and then the other tube, it was opened for confirmation.

So --

Q. And -- I'm sorry.

A. That's it.

Q. So how many days would've passed between opening the first vial and opening the second vial?

A. I can't specifically tell you because I don't have that data in front of me, but it would not be more than two or three days. If it is a weekend -- like, for instance, if it is a screening on Friday, we know we have to confirm it on Monday. So it would be three days. But sometimes, it could be one day. You know, the first day, we open one; the second day, you know, we open the other one.

Q. Now, Dr. Guale, can you please just briefly tell us a little bit about fermentation and how it applies to blood analysis?

A. Fermentation is a problem usually on postmortem cases; and then when it is a postmortem case, also, there are also two conditions that have to be fulfilled. One, the yeast have to exist in the system, which is a Candida albicans; and then the second condition that has to exist in that particular sample is a person being diabetic or high glucose.

So when that happens and a person dies, it can either form it after the person dies because of the

infection with the yeast or before the person dies, if the person has got a yeast infection. And, usually, you see that in the urine, not actually in the blood.

But in blood samples that are collected from DWI, regardless of what exists, because we -- or the blood is collected in a preservative, that should never happen.

Q. Now, Doctor, you mentioned that yeast is collected in the urine and not the blood. Are you saying that that would only --

A. Infection.

Q. I'm sorry, what was it?

A. It's a yeast infection.

Q. Okay.

A. If a person suffers from a yeast infection or if the yeast is in his system or in her system and then at the same time, that person is really highly diabetic with uncontrolled diabetes, they do have, you know, a lot of glucose so the yeast would work on the glucose and it would produce ethanol. That is actually -- you know, in a urine sample that's not preserved, you can see that.

Q. In the testing that is only -- well, ethanol and -- is there -- there are three other --

A. Yeah, there's ethanol, methanol, acetone, and

isopropanol. We check for those.

Q. So when the blood is determined to be above a certain decimal point, you only test for those; is that correct?

A. No. Every time a sample is tested for alcohol, we test them for all those four.

Q. Yes. And then -- but then any other substances, there's no -- there's not any way to determine if any other substances exist in the blood because of that type of test; is that correct?

A. We check it only for alcohol and the other volatiles. But if the sample contains less than 0.17 alcohol, we go further and test it for drugs.

Q. And so when it's at that 0.17, you only zone in on the ethanol; is that correct?

A. We just report only the ethanol result.

Q. Okay. Thank you, Dr. Guale.

THE DEFENDANT: I pass the witness.

MS. LITTLE: Your Honor, we have no questions for this witness.

THE COURT: You may step down. Thank you so much for coming.

THE WITNESS: You're welcome.

THE COURT: Call your next witness. Defense, call your next witness.

draw the blood. Sit the tubes down. Afterwards we take the needle out, cover it with the gauze and tape, and then the officer asks us to sign the form. Sign the forms and the officer labels the blood and put the
02:36 blood back in the box.

Q. And that's a pretty standard procedure that you do every time?

A. Yes, sir.

Q. Have you done a lot of these blood draws?

02:36 A. Yes, sir.

MR. MURPHY: Okay. Pass the witness, Your Honor.

MR. PORTIS: No questions, Your Honor.

THE COURT: Thank you, sir.

02:36 Thank you, ma'am. You are excused.

MR. MURPHY: May this witness be released, Your Honor?

THE COURT: Yes, sir.

Call your next witness, please.

02:37 MR. MURPHY: The State calls Dr. Guale.

THE COURT: This witness has been previously sworn. Thank you, ma'am. If you will have a seat in the witness chair next to me. Please speak directly into the microphone. Try not
02:38 to speak over the lawyers and they will try not to

speak over you. Please proceed.

DIRECT EXAMINATION

BY MR. MURPHY:

Q. Good afternoon, Dr. Guale. Would you please state your full name for the Court and the jury?

A. My name is Fessessework Guale. F-E-S-S-E-S-S-E-W-O-R-K, first name. My last name is G-U-A-L-E.

Q. And, Dr. Guale, how are you currently employed?

A. I am employed by the Harris County Institute of Forensic Sciences. I am the analytical operations manager.

Q. And could you tell us a little bit about your background, education, and training?

A. I have a doctorate degree in veterinarian medicine. And I also have a master's degree in toxicology. And I have generally about 22 years of practical working experience in the laboratory, veterinarian laboratory and forensic laboratory.

Q. And how long have you been working in your current position?

A. In Harris County, I was first toxicologist two, then I got a promotion as a toxicologist one. And then the position that I am right now, I have been there for

isopropanol. We check for those.

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Q. And how long have you been working in your current position?

A. In Harris County, I was first toxicologist two, then I got a promotion as a toxicologist one. And then the position that I am right now, I have been there for

four years as a manager.

Q. Does the Harris County Institute of Forensic Sciences have any sort of accreditation?

A. Yes, we do have two accreditation. One is ASCLD-LAB International. The American Association for Crime Lab Directors, Laboratory Accreditation International. And the other one is ABFT or we call it the American Board of Forensic Toxicology. And then the other one is DPS of course. DPS, we are certified by DPS too.

Q. Are there standards and requirements in order to get those certifications?

A. Yes, these are very stringent rules, and specific rules, quality control rules that we have to follow. Every year we have to go through an inspection and we have to perform the qualifications that we need to perform and fulfill, and the standards are international standards too.

Q. And does the Harris County Institute of Forensic Sciences perform testing on blood samples?

A. Yes.

Q. How do they test blood samples?

A. Well, the blood is -- we do have two different sections. One is post-section where we receive, you know, samples from the medical examiners. And the

other is DWI kit samples from law enforcement agencies around Harris County. And for both testing we do have different protocols. For DWI cases we do have a separate protocol from the other one. And then our protocol for DWI cases once the blood is received by the evidence technicians, it will be logged into the information management system in the toxicology laboratory, and then it would be given an identifying number. From there on, it follows -- the chain of custody follows that bar code. And in the way we do it, we analyze the samples first for alcohol and then if the alcohol comes in below a .16 gram per 100 milliliters, then we subject that sample to full toxicology drug screening. And then toxicology drug screening is also divided into two. One is for elicit drugs, the common drugs of abuse, and the other one is for all the prescription and over-the-counter drugs and some drugs that had an abuse potential and also the designer drugs that are out there.

Q. And what is the methodology for testing blood toxicology for these drugs?

A. We do have several different type of methodologies. The screening we call them -- there's gas chromatography, mass spectrometry, and the other one is liquid -- mass spectrometry. We have several

different kind of methodology.

Q. And are these methodologies generally accepted within the scientific community?

A. Yes.

02:42 Q. Are they accepted for producing accurate results?

A. Yes.

Q. And does this lab comply with scientific standards for administering these methodologies?

02:42 A. Yes, that's one of our requirements is to perform validation that the accreditation standards should apply. So all our maintenance are specific for specific purposes and that for -- national standard analysis.

02:43 Q. And whenever you receive a sample of blood in your lab that is sent for toxicology testing, how do you ensure that blood identifiers stays unique and doesn't get mixed up with anything else?

A. We do have quality control checks and balances 02:43 that we have in our system. Once the bar code is given, and all that bar code is going to be on the tube, and then every time that tube is touched, the person who touched it will have a bar code and scan that bar code. It's electronically followed. So once 02:43 it's in the possession of an analyst who is performing

the testing and another person is going to come and initial what that is -- correct within the steps of the process. So we have several pre-analysis check, post-analysis check. And then once the post-analysis check is done, where the person is recording -- reporting the result on the data that would be again reviewed by another person. And then once that data is technically reviewed, there will be expert reviewer and that's when we report it out. We have several layers of checks and balances.

Q. I am showing you what has been previously admitted as State's Exhibit 4. And there's a bar code there. Can you explain what that bar code is?

A. This is the number that we give that's also on the case folder and that's also on the samples. This is what the bar code -- the unique identifier number that we give on each sample.

Q. So this bar code is how you know that the same samples brought in is the same as the test results that you are getting and the same blood that gets check back to the agency when it's all done?

A. Yes.

Q. Now were -- was a blood sample submitted to your lab by a J. Barcelona for a Lanis Ray Hitt,

the IFS# would be 14-09330?

A. Yes.

Q. And approximately when was that tested?

A. There are several different testings done, so the testing time is going to be very variable. But I can tell you it was tested for alcohol by Andre Salazar -- 8-1-14, and reported -- initial date -- reviewed by Andre by 8-4-14. And then it was technically reviewed by Patricia Small on 9-11-14. And that's only one analysis.

Q. Was there any alcohol indicated in that one?

A. No, there was no alcohol indicated in that.

Q. And so what's the next step?

A. The next step was the biochip array, which is -- checks for nine different drugs, group of drugs. And was done by Andre Salazar on 8-8-14. And then reported on 8-11-14. And technically reviewed by Patricia Small, 9-11-14. And the other screening that we did was time of light mass spectrometry screening for the eight drugs, which are included prescription drugs and over-the-counter drugs and other synthetic marijuana and bath salt drugs. And those were performed by an Andrew Ru-may (ph) on 8-6-14 and reported by Crystal Arndt on 8-13-14, and reviewed accordingly. And the other was identified. That needs to be confirmed. So

it went to be confirmed by the liquid spectrometry on 8-19-14. And then the biochip area came back positive for Benzodiazepines and then a confirmation on Benzodiazepines was performed on 8-22-14.

02:48 MR. MURPHY: Permission to approach the witness, Your Honor?

THE COURT: Yes, sir.

BY MR. MURPHY:

Q. I am handing you what has been previously

02:48 marked as State's Exhibit 17. Do you recognize that?

A. Yes.

Q. And is that an accurate copy of the lab reports?

02:48 A. Yes.

Q. And at the end of it whose signature is that?

A. This is a technical reviewer of the whole case, where is Patricia Small, and that is my signature as

02:49 well, as expert reviewer.

MR. MURPHY: State offers State's 17 and tenders to the Defense for inspection.

MR. PORTIS: No objection, Your Honor.

THE COURT: State's 17 is admitted.

(Thereupon, State's Exhibit Number 17

was admitted into evidence.)

MR. MURPHY: The State requests permission to publish to the jury State's 17.

THE COURT: Yes, sir.

BY MR. MURPHY:

Q. Okay. Now up in the upper left-hand corner here there's a laboratory number. You see it?

A. Yes.

Q. Is that the number that you were referring to earlier?

A. Yes.

Q. And that's a unique identifier?

A. Yes.

Q. And so no other case would have that number; is that correct?

A. No.

Q. And it says that it's identified with a suspect. What does that mean?

A. We just put the suspect's name whenever we are given a submission form. The officer will drop it. We get that name from the -- under the suspect. We get that name and put that name as the suspect there.

Q. And is that number tied to that suspect name?

A. Yes.

Q. And on this specimen of blood it lists three analytes; is that correct?

A. Correct.

Q. And what is that first one; Alprazolam?

02:51 A. The common name of that drug is Xanax. It's prescribed for anxiety disorders and panic disorders. It's a central nervous system depressant.

Q. You said it's a central nervous system depressant?

A. Yes.

Q. So what kind of effects can it have on someone who consumes it?

A. Normally, you know, when it's normally taken for normal purposes, it would alleviate those symptoms of

02:51 anxiety and those symptoms of panic attacks. But as a side effect and whenever somebody has got sensitivity to it, it would go on and causing the side effects, which is, you know, disorientation, dizziness, inability to stand and tremors. You know, slurred

02:52 speech and thick speech or slurred speech. Yet it can affect it that way and also can affect -- because of that it affect driving performance of a person.

Q. Are you aware if manufactures of this compound generally put the warning labels for its

02:52 use?

A. Yes.

Q. Are there any activities that you are aware that they are not to do while consuming it?

A. Yes, it was basically warn them, you know, do not do or operate machinery before you know how you act to this drug, or how your body reacts to this drug.

02:52

Q. And the levels that are observed here, would that be enough to influence someone's behavior, how they act?

02:52

A. If they act by themselves and that person's body does not react to the right prescription amount and if it is by itself and no -- any other central nervous depressant, if the -- that would be normal. Even with this normal amount, you know a person may show some impairment, but that would be the person who can say this. And it is possible it can cause even by itself an impairment, or it may not.

02:53

Q. And this second one, Carisoprodol?

A. Yes.

02:53

Q. What is that?

A. The common name for this drug is Soma and this is usually prescribed as a muscle relaxant. And that's Soma, which is prescribed as a muscle relaxant, would be metabolize in the body or change in the body to Meprobamate. And we call these drugs metabolites of

02:53

one another. Meprobamate by itself is a drug. There is a prescription for it that is usually for anxiety or antianxiety medication by itself. So it would have equal strengths on somebody's body.

02:54 Q. And are these levels of Carisoprodol and the Meprobamate, would that be normal range, are those high? What can you tell us about those levels in the system?

A. If it is by itself, it can be normal. But

02:54 usually when it is more than ten, when both of them come and they are greater than ten, there's definitely an impairment.

Q. And does that mean the combined levels of those two --

02:54 A. Yes.

Q. -- which appear to be somewhere around 15 milligrams per liter?

A. Yes.

Q. And would that be a level that you would

02:55 normally expect some level of impairment?

A. Yes.

Q. Are you aware of any warnings that are placed on either of those two substances?

A. Yes, it's the same way, it's the same way. You

02:55 know, before you take this medication, you have to

assess yourself, how your body reacts and to not drive, or operate any machinery.

Q. Now can you tell us about drug synergy interaction?

02:55 A. What drug synergy is, if you are taking the same kind of central nervous system depressant, like in this case, they will have additional affects. It may not be necessarily a synergistic affect, but an additional affect. That means, if you take Alprazolam by itself, 02:55 you may not be affected. Or if you take the Carisoprodol by itself, you may not be affected, but if you are combining the two, you definitely are going to have the same additional affect, because each of those drugs affect the central nervous system the same way. 02:56 They have a depressant affect. So that means they will potential the toxicity of one another.

Q. And so, if I understand you correctly, because these are similar type drugs, the affect is exaggerated?

02:56 A. Yes.

Q. Could you briefly -- there were a number of substances that were tested for that were not detected. Can you explain what some of that testing is for, some of the more common ones?

02:56 A. The more common ones are all the ones that are

up here. There are some from our benzo and some from our synthetic marijuana compounds. And like, you know, TAC, or marijuana, or Opiates, or Methamphetamines, PCP, and all the others, you know, the sleeping drugs, they are not there. And those are commonly abused drugs.

Q. And so you screen for these to make sure exactly what's in the blood; is that right?

A. Correct.

Q. Based on these levels of drugs in a person's blood, can you form any kind of opinion about intoxication?

A. I can definitely tell you this combination is dangerous and it can cause impairment.

MR. MURPHY: Pass the witness, Your Honor.

THE COURT: Mr. Portis.

MR. PORTIS: Thank you, Judge.

CROSS EXAMINATION

BY MR. PORTIS:

Q. Good afternoon, Dr. Guale.

A. Yes, good afternoon.

Q. Can you explain to the jury what Suboxone is?

A. Suboxone is a drug name where there are two

drugs combined in it; one is Buprenorphine and the other one is Naloxine. These two drugs are narcotics. And if the person is on Naloxine, the way it is prescribed is, for the treatment of narcotics addiction.

Q. Did Suboxone show up in these lab results?

A. Yes, we tested that. Actually, if you put that back here, I can show you which drug it is. Go up here. Buprenorphine is the main compound in Suboxone. And it's not there as you see.

Q. Non-detected?

A. Non-detected, yeah.

Q. You said that Carisoprodol --

A. Yes.

Q. And Meprobamate --

A. Meprobamate.

Q. Sorry, you are better than I am. If there's a level of 15 milligrams or above, then that could have an affect?

A. Yes.

Q. What's a normal prescription amount for an adult?

A. You mean the tablet?

Q. Yes.

A. The tablet is -- usually come in 350 milligrams

and then usually have to take three times a day and one at night. That means you can take up to 1400 per day, 1400 milligrams per day.

Q. What would the results show if someone had taken 14 milligrams in a single day?

A. In a single day, if you consider that, they should be around 3.5, 3.6, up to 4.8 milligrams per liter of blood.

Q. For a combination of both or just the Carisoprodol by itself?

A. For Carisoprodol by itself. Because these things could go, transformation in the body at a given time one may be higher and the other one may be lower. In this particular case, the Meprobamate is higher and the Carisoprodol is lower. That means that's been metabolized. There can be two things that can be said. This has been taken for a long time, so that the problem is accumulated, or it's been taken yesterday and then it's being metabolized and then the second day regimen hasn't been taken or absorbed.

Q. So are these numbers atypical?

A. Normally if you are taking a -- according to prescription, they should not get to that amount.

Q. You said the Meprobamate --

A. The Meprobamate.

Q. If they have been taking that for a long time, then it will metabolize in the blood in a different way and there may be a higher level?

A. No, it's the Carisoprodol that you are taking. If you are prescribed Meprobamate by itself, you would not see the Carisoprodol. Okay. But if you are taking the Carisoprodol and, you know, if it is normally metabolized and then half day for instance, you know, your blood is taken, it could be equal, you know, 2.8 Meprobamate and, you know, 2.5 Carisoprodol. And then by the time you take the other, your other prescription, like at night if you take it and just take blood and observe it in an hour, you may see a rise of the Carisoprodol because you just take it. You have to let the body metabolize it or change it or transform it. By the time it's time for your next dose, you may see the Meprobamate higher and the Carisoprodol lower. So that's why in this particular case it's my opinion that this would have been accumulated Meprobamate.

Q. The other drug, the Alprazolam --

A. Alprazolam.

Q. Xanax?

A. Xanax, yes, sir.

Q. It indicates a level so that the other two

indicated a total of what, 15 milligrams and Xanax is .046?

A. Yes.

Q. Is that a trace amount?

03:03 A. No, it is not a trace amount. Like for instance, the Carisoprodol, the tablet that you are taking, is 350 milligrams. But when it comes to Alprazolam or the Xanax tablet, it only has one or two milligrams per dose. There is a hundred times 03:03 difference between the two doses. That's why the label is almost a hundred times, you know, low, because it depends on how that small amount of drug acts in the brain. So for your muscle, you know, to get relaxed, it takes that much Carisoprodol, you know, to activate 03:03 into that side of the brain and the muscle as opposed to the Xanax which takes only very little amount to do the function.

Q. You said on the Carisoprodol that there was a warning label that would prohibit driving; is 03:04 that correct?

A. Yes.

MR. PORTIS: May I approach, Your Honor?

THE COURT: Yes, sir.

03:04 BY MR. PORTIS:

Q. Are you familiar with this kind of a label?
A. Yes, it says may make this worse, use care when operating a vehicle, vessel or dangerous machines, don't drink alcohol beverages while taking this
03:05 medication.
Q. Thank you. But it does not say do not operate a vehicle; it says use care, correct?
A. Do not operate is the same thing.
THE COURT: Doctor, if you would be so
03:05 kind when they object, just hold on for one second.
MR. MURPHY: This is asking for testimony from a document not in evidence and we haven't had a chance to even review it yet.
MR. PORTIS: She just testified.
03:05 THE COURT: She did testify to it. I believe she was answering your question. Your objection is overruled. Doctor, please answer the question.
THE WITNESS: Okay. This is what it
03:05 says. Do not operate machinery before you realize how your body responds to it. Once you know your body is okay with it, you can operate machinery. That's what it means.
BY MR. PORTIS:
03:06 Q. You would agree it doesn't literally say

that on here, correct?

A. No, it does not say do not drive and when you are under this medication, no.

Q. But you would agree that based on what you said, that if somebody had been taken those drugs for a long period of time, that they would be able to understand what their body may or may not be able to handle?

A. They would, but it doesn't mean they always notice.

MR. PORTIS: No further questions, Your Honor.

THE COURT: Any further questions?

MR. MURPHY: Briefly, Your Honor.

THE COURT: Yes, sir.

RE-DIRECT EXAMINATION

BY MR. MURPHY:

Q. Now it was your testimony earlier that even on the high end of Carisoprodol, the combined amount of that with Meprobamate, you would expect to see somewhere around 4.8 grams; is that right?

A. State your question again.

Q. That someone who is taking Carisoprodol on the higher end of the dosage, but still within what might be normal, you wouldn't expect to see a

combined level of more than about 4.8 milligrams per liter combined; is that right?

A. Depending at what time the blood was drawn is the fluctuation. But it should never come more than, you know, with the normal taking, it should never come above ten at all.

Q. And here it's clearly above ten?

A. It is clearly above ten.

Q. And whatever you were handed earlier, you don't know where that came from do you?

A. No.

Q. And you don't know if it could have just been printed up before this trial today?

A. Could be, don't know.

Q. And did it say anything about taking Xanax and Soma together and driving?

A. No.

MR. MURPHY: No further questions, Your Honor.

MR. PORTIS: No further questions.

THE COURT: Thank you, doctor. You are excused.

Call your next witness, please.

MR. MURPHY: State rests, Your Honor.

THE COURT: Mr. Portis?

THE COURT: Thank you, ma'am. You're excused. Call your next witness.

MR. STEWART: State calls Dr. Guale.

THE BAILIFF: This witness has not been sworn in, Judge.

THE CLERK: Raise your right hand.

Do you swear the testimony you will give before the Court will be the truth, the whole truth, and nothing but the truth? If you do, say you do.

THE WITNESS: I do.

(Witness sworn in.)

THE COURT: Okay.

FESSESSEWORK GUALE,

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. STEWART:

Q. Good morning. Would you state your name for the jury, please.

A. My name is Fessessework Guale. F-E --

Q. Go ahead.

A. -- S-S-E-S-S-E-W-O-R-K, G-U-A-L-E.

Q. And what is your profession, your profession?

A. I'm a forensic toxicologist.

Q. And would you tell the jury what that is?

A. A forensic toxicologist is a person with a

profession in forensic toxicology dealing with analyzing samples from a human body and finding out what is contained in that biology sample, and report what that is. And then that result will be used in a court of law.

Q. And how long have you done this?

A. I have been in forensic toxicology for the last 15 years.

Q. And where do you work?

A. I work for the Harris County Institute of Forensic Sciences Toxicology Department.

Q. And could you describe some of your duties with that position at that place?

A. I am the toxicology analyst, corporations manager and codirector of that section. And what that entails is taking care of or managing the cases, and overlooking the case flow, and managing the employees, and also doing technical review on the cases, and also administrative, and expert review the cases and sign on the cases.

Q. Could you tell the jury about your educational background?

A. I have a medical degree, and I also have a master's degree in toxicology. On top of that, I have two board certifications, one by the American Board of

Toxicology and a diploma. And the other one is by the American Board of Forensic Toxicology as a forensics toxicology specialist.

Q. In your training or in your education, have you ever learned about the physical affects of alcohol on the body?

A. Yes. When you do perform or go through master's degree, what you learn is explicit details of pharmacology. That means dealing with what drugs and chemicals do to your body, and at the same time, what does a body react to it and how it expresses out. So, one of the drugs is alcohol.

Q. So, it's fair to say you know quite a bit of research on this?

A. We do get exposed to workshops that deals with alcohol and DWI cases. We also, in my lab or Harris County Conservative Workshop about drugs, and DWI drugs and alcohol in DWI cases. And we go to several nationally renowned meetings and conferences. We do presentations there. And we do also have a requirement by our accreditation body. Every forensic toxicologist has to do a continuing education program where it is a requirement. So, we have to fulfill it by doing so. And also, we sponsor waiving ours in the lab and train others at the lab including ourselves.

Q. Okay. So, let's talk about alcohol. How quickly does it absorb in the body?

A. Alcohol gets observed so fast in average because we all are different. The average is 90 minutes, you know, between 30 and 90 minutes. But in some very, very minor instances, you know, you can absorb alcohol within 15 minutes; or in very, very low instances depending on your situation, you know, the absorption can take up to two hours. That's the maximum in the literature.

Q. So, is there an average absorption rate?

A. It's not per se a rate, because it's variable. We call, you know, 60 minutes. We use 60 minutes as an average. And then ranging between 30 to 90 minutes for population, for the 90 percent of the population.

Q. Are there ways in which you can tell -- let me rephrase. Have you heard of extrapolation before?

A. Yes, sir.

Q. And could you explain to the jury what that is?

A. Extrapolation is going back and calculating the alcohol concentration in one's body, by using the concentration at an even time. Like, for instance, if the concentration is .1 at 2:00 o'clock, and what would be the concentration at 1:00 o'clock; or going back at 1:00 o'clock or 3:00 p.m. in the afternoon. So, that's

what extrapolation means.

Q. Okay. So, you could have a blood result that was drawn at 1:00 o'clock in the morning, and he came back at .145, and the stop was at 9:00 p.m. the night before that, would you be able to do some sort of extrapolation?

A. Yes. Just using or assuming that person is in the elimination phase, you can use that average which is documented, and which is going to be .15 gram per alcohol or decimeter per hour elimination. Using that assumption, the alcohol would be .211 at 9:00 o'clock or 9:20, 1:00 o'clock.

Q. And are there other facets you would like to have to do an extrapolation?

A. Yes. To have an -- you know, extrapolation as was thought in -- or was punished, you get the demographic data on the person. And the most important thing you need to have to start the drink, and there's a stop time to drink, so that you can assert when the time that you wanted to extrapolate to is clearly is in elimination or absorption.

Q. And based off the things you told us, who would have the best knowledge to give you that information, or the officer the information?

A. Well, whomever else is examining the person.

Q. Okay. So, let's talk about alcohol in the blood. When the alcohol is drawn, or when the blood, excuse me, is drawn from somebody, does it need to be refrigerated?

A. It's a standard protocol, that in our lab, they -- as soon as we received the sample, and we give it a unique identifier number, and then it would be ultimately put in the refrigerator.

Q. Okay. And do you have only blood that might contain alcohol or ethanol?

A. We do receive sometimes urine.

Q. Okay.

A. And we also do -- you know, that's when we -- when it -- when it is a DWI case, in our post-sequence cases, we do have other tissues that we run alcohol on.

Q. Okay. And do you house blood that might have other drugs in it?

A. Yes.

Q. And is it more important for certain chemicals that you're looking for to be refrigerated than others?

A. Yes. There are drugs or chemicals that are sensitive to a breakdown if you don't store them in a refrigerator, and to protect that and just to be sure 100 percent the sample and temperature is kept. We always keep them regardless of what's -- what's in

there. We just keep them in the refrigerator.

Q. Would you say it's critical to keep a blood vial that might have ethanol in it refrigerated?

A. Depending on how you handle it. Sometimes it would be okay to leave it in the room under a room temperature as long as there is preservative in it but for a full period of time. So, like, for instance, where you are performing analysis, you would put it out of the refrigerator, and then you have to keep it at room temperature until you do your testing. And then you have to put it back into the refrigerator. So, that in those situations, it's not that critical.

Q. So, for a blood vial -- for a vial that's containing blood that's to be tested for ethanol, what would be the affect if it were left outside on the sidewalk today, on a Houston summer-like today?

A. It depends if you have a preservative or not. If you do have a preservative in that blood and you leave it out there for a day, you may not see a significant change in the alcohol. But if you leave it for an extended period of time outside, you know, you may have a very small, from the patient, depending on, you know, what kind of, you know, germ is in there. But it usually -- I have never -- there was a study that they did expose the blood under, you know, body

temperature which is 70 degrees, which is equivalent to 98 degrees outside, where they left it there for, if I remember correctly, for 72 hours or beyond. They come up -- well, at the same time, they injected it with a micro which is a fungus. And then -- but they added the preservative in there. And because the preservative was in there, the alcohol from the patient was so minimal, it was not significant at all. So --

Q. Okay. So, let's do the opposite. Say the blood was left outside on a winter day, a Houston winter day, say 60 degrees outside, would that have any affect on the analysis of the alcohol level, the ethanol level that's in the blood?

A. As long as you have the preservative in there, no.

Q. Okay. What if the preservative was not in there?

A. If the preservative is not in there, there's no telling what happens because there may be some opportunities to stick germs in there that can perform any kind of finalization. So, you don't have any control on that one. So, I cannot say yay or nay on that.

Q. Okay. And have you heard of the vials that are commonly referred to as the gray top vials?

A. Yes.

Q. And could you explain what those are and why the gray top is important?

A. We require as a protocol that all the DWI samples, the gray top, because we know the gray tops do have a preservative, which is a sodium fluoride in them, and also an anticoagulant which is a sodium oxalate so that the blood cannot coagulate. So, those two chemicals are added in the gray tubes. So, by the time we get them, and we are sure they're not coagulated or reasonable termination in that.

Q. Back to your experience as your research in alcohol on the effects of the body, at an alcohol level of .1.5, how would that affect the human being?

A. That's almost twice the legal limit. It's higher. And then under that -- under a person who has that alcohol in the system would be impaired because impairment includes like the sensory motor function would be impaired. Your critical judgment would be impaired. Your time and distance perception would be impaired. Your visual will be impaired because you don't have a great recovery, or your permanent vision would be impaired, especially driving at night. You can be -- you know, you can have a slurred speech or stumble, or you would have a wobbly when you were

walking. And that means under those situations, you really cannot operate a motor vehicle.

Q. Okay. And in your opinion, based on your research you may have done, at what blood alcohol level does your body start to see effects? Let me rephrase it for you. At what level of blood alcohol concentration does the human body start to be affected?

A. Well, there has been a research where, you know, you will have some level of effect at a .05, as well as a .05. And sometimes, if you are actually a night drinker, you may have seen -- you may see effects even at a .02 or a .03. It just depends how often you drink.

Q. And are you able to, I guess, kind of scale what one drink equals on the .00 whatever, for the blood alcohol concentration?

A. Well, generally speaking with an average, you know, one drink can give you a concentration of .02 of, you know, grams per decimeter of alcohol in the blood.

Q. So, at a .145, how many drinks, in your opinion, would be -- excuse me, would have needed to be consumed to get to that level?

A. Depending on the time that you were drinking like, for example, if you were drinking, it was in three hours, you know, to get to that level, it probably takes

about seven to eight drinks. But if you're taking longer time, like five, six hours or sitting in a bar and drinking for longer than three or four hours, it may take about ten. Because by the time, you know, just drinking and you are also eliminating part of the alcohol. So, the longer the drinking time, the more drinks that you need to get to that level.

MR. STEWART: Pass the witness, Judge.

THE COURT: You may proceed.

MR. TRENT: Thank you, Judge.

CROSS-EXAMINATION

BY MR. TRENT:

Q. Is it Dr. Guale?

A. Yes, sir.

Q. My name is Mike Trent, and I represent Warren White. I just have a few questions for you. Okay. First of all, let's start by saying, you have no idea what the blood alcohol level of my client was at the time that he was stopped, do you?

A. No, I don't.

Q. You don't have any -- you can't offer this jury any insight on what his blood alcohol level was at the time he was driving, can you?

A. No.

Q. Now, you have offered some possible

extrapolation on what it could be under certain circumstances, right?

A. Yes.

Q. And I think you offered, if you assume that a person was in elimination, and they were tested, stopped at 9:00 p.m., tested at 1:00 p. -- 1:00 a.m., and the test comes out .145, I think you said assuming elimination, it might be around .21; is that right?

A. Right.

Q. Okay. If you assume -- if you don't assume elimination, though, those numbers go out the window, right?

A. Yes.

Q. There are plenty of scenarios in which someone can, you know, either ingest a lot of alcohol or be at a level under .08 with all those other variables the same, right? When I say, all the other variables, I mean the time of stop and the time of blood draw.

A. Would you rephrase the question, please?

Q. Okay. I mean, if a person -- if you still assume driving or stopped time of 9:00 p.m. and a blood draw of 1:00 a.m., that it's a .145, there are scenarios under which they can be under the legal limit driving, correct?

A. I don't see that.

Q. You don't see any way of that happening?
A. No.
Q. How much alcohol would have to ingest right before they were stopped in order to get to a .145 in four hours?
A. If you are asking me how much drinks they must have had right before he was stopped which is 9:30, 9:21?
Q. Let's say 9:00 p.m.
A. Okay, 9:00 p.m. Let's just assume figuratively he had -- for the person to get .145, I would say a minimum of seven or eight, right?
Q. Right.
A. Okay. So, let's assume that he had all of that. And humanly possible, how long did it take to take all of that or, you know, like seven or eight drinks humanly possible?
Q. Sure.
A. How long?
Q. Well, you're the witness. I'm not. So, let's assume --
A. Assuming -- let's assume that. I just want you today, and so that I can give the right --
Q. I mean, let's assume the person guzzles it --
A. Okay.

Q. -- I mean, just drinks a bunch of alcohol all at once --

A. Okay.

Q. -- are you saying that it's impossible for them to get to that level if their blood is tested four hours later?

A. Okay. Let's assume that he guzzled it, okay, at 9:00 o'clock. And then he got stopped at 9:21. And then 1:00 o'clock, he took -- so, from 9:00 o'clock what the maximum hour that you can give for absorption is what's occurring is two hours. Let's take that scenario, which is unusual, but just to give the benefit of the doubt to the defendant, we're going to do two hours. Okay. So, two hours means 11:00 o'clock. By 11:00 o'clock, he has to stopped absorbing, right?

Q. You're the expert, not me.

A. Okay. So, from 11:00 o'clock to 1:00 o'clock, he should be eliminated, right?

Q. Assuming two-hour absorption, right.

A. Assuming two-hour absorption. So, by two hours of absorption, he may have to come back to a larger amount of .145 considering he should be eliminating for two hours, right? If he was eliminating for two hours, then he should have been higher than .145 by 11:00 o'clock. So --

Q. I'm not sure I follow that, but.
A. So, you go back to when he was stopped.
Q. No, I don't understand. I mean, you're saying it's impossible for a person to drink enough to be at a .145 four hours later. Is that your testimony, yes or no?
A. Rephrase it again.
Q. All right. Are you saying that it's impossible for a person to drink enough to be at a .145 four hours after the stop?
A. He can't drink that much. It's possible.
Q. He can drink that much, and a person can be under the legal limit under that fact pattern, right?
A. Yes.
Q. I mean, you can -- you can adjust the times of ingestion and the times of absorption depending on the person to where -- I guess my point is, they're not necessarily over the legal limit, are they, at the time of driving?
A. If you're assuming the person that does have a guzzled effect, that he did it at 9:00 o'clock, and you have that indication or the open container, or something in there, or he said, you know --
Q. Well, these are just hypotheticals.
A. Yeah.

Q. I'm just talking math.
A. Yeah. I know.
Q. Okay. So, it's a follow-up. It is possible for a person to be under the legal limit even if their blood draw indicates .145 four hours later, isn't it?
A. If you're assuming guzzle effect, yes.
Q. Assuming that or other things as well, right? I mean, there are other scenarios in which a person can be under the legal limit four hours later, right?
A. Correct.
Q. Okay. Now, to get to .145, you're saying seven or eight drinks, correct?
A. Correct.
Q. Now, even that is adjustable according to how long they are drinking, right?
A. Yes, sir.
Q. Because even as you're drinking, you're absorbing and eliminating.
A. Yes, yes.
Q. All right. So, I want you to assume for my fact pattern, let's say that ingestion of alcohol begins at 7:00 p.m. --
A. Okay.
Q. -- stops at 8:30, time of driving and stop around 9:00. How much would that person have had to

ingest -- and I can give you, if you need the weight or anything, I can provide that. But I would like for you to calculate for the jury how much that person would have to ingest to be at a .145 four hours later.

A. Okay. Give me a scenario.

Q. Drinking begins at 7:00.

A. 7:00 start time, okay.

Q. Ends at 8:30.

A. Okay.

Q. Time of stop 9:00 p.m., time of blood draw 1:00 a.m., and the person weighs 220 pounds. I don't know if that affects it or not, but I'll give you that.

A. That's fine. So, first, we have to calculate how many drinks the person must have drank to get to, which is one hour, 1:00 a.m. which is 0.145. Do we agree?

Q. And let me ask you about that assumption just for a second before you do your calculation. When you say one drink roughly equals .02, are you referring to, when you're talking about mixed drinks, is that one ounce of alcohol?

A. No. It's when we call one standard drink. One standard drink is -- usually, it would have a .6 ounce of alcohol. One standard drink is one beer or one wine which is 5 ounce of wine, or 1.5 ounce of liquor.

Q. 1.5 ounces of liquor.

A. Liquor, yes.

Q. Okay. All right. Go ahead.

A. Okay. So, to calculate this, you know, how much drink the person must have had, I would have to use 0.145 as a concentration of blood and capital gain as grams in alcohol, that person has to consume. That has to be divided. And we're just using a weight mark format, okay. It has to use 220 pounds, I have to change it to a kilogram, which is going to be --

Q. A hundred?

A. -- 100, yeah -- 100 times the witness, with more factor which is .68. That is distribution on a male. That number comes from a mid mark in question. So, and then minus -- I'm going to use the .015 bridge elimination rate for all the times that he's been there. And at the time of the -- the start time would be 7:00, and the draw is 1:00. So, there are six hours in this calculation.

Q. Okay.

A. Okay. We're going to do six times 0.15, 0.015. So, 0.145, plus 0.09 would be 0.235 which equals to A, which is in grams alcohol, divided by .68, which is going to be 68. And so, this will be 6806038. And then A would be, let's see, 80 times .235 is equal to 159

grams, okay, 159 grams. You know, we have to change it into ounce. We have to divide that by, you know, 123.36 ounce, which is equal to 6.84. And then that would be how many drinks? 11.4 drinks.

Q. Okay. So, 11, 12 drinks to get to the --

A. Yeah, because you see, the longer the hour --

Q. Right.

A. -- you know, the higher the number of drinks.

Q. Right. So, if we assume that the blood test is correct, and those other variables that I gave you, that person would have had to consume almost a dozen drinks to get there?

A. Beginning at 7:00 o'clock.

Q. Right. Okay. Now, I think you testified earlier that at a .145, you would expect to see signs of impairment, correct?

A. Correct.

Q. Symptoms like -- you can give them again, disorientation maybe?

A. Yeah. You can feel disoriented and feel dizzy. You can feel, you know, you can have slurred speech.

Q. Okay. And what about motor coordination?

A. Yes, motor coordination can be affected. You can be ataxic or not walking right or stumbling to fall.

Q. Balance can be affected, right?

A. Balance, yes.
Q. Equilibrium?
A. Equilibrium.
Q. Perceptions?
A. Yes.
Q. Now, do you have any -- now, I think you said that your doctorate is in veterinarian medicine.
A. Yes.
Q. Okay. So, animals?
A. Animals.
Q. Okay. Do you have any familiarity with diabetes in humans or the effects of it?
A. Yes.
Q. Okay. Can some of the symptoms that we talked about be duplicated by diabetes or by a diabetic episode?
A. There are two scenarios in diabetic episode. One is hypoglycemia, or where your blood sugar is very low. And the other one is hyperglycemia when your blood sugar is very high. If you suffer from hypoglycemia or a low sugar level, your driving can be impaired. If you have a low sugar level, yes, you can have an impaired driver.
Q. And are you suggesting that that can't be the case with hyperglycemia?

A. No, sir.

Q. You're saying that hyperglycemia does not have any effect on impairment of driving?

A. No, sir.

Q. Really? What do you base that on?

A. Well, because when you think about why is it that you would have dizziness, you know, or week bodily functions, or all of the effects of the driving impairment associated with low glucose, it's because your brain does not get enough glucose. Because your brain does not get enough glucose, it does not perform in the normal functions that is expected to be done by your body. So, it really limits impairment.

Q. So, I mean, whose findings would you put ahead as more authoritative on this subject, your opinions, or the opinions of the American Medical Association, the American Diabetes Association, webmdmedicine.net? I mean, who do you think speaks more authoritatively on the subject of hyperglycemia?

A. What do they say?

Q. Well, they say that it can.

MR. STEWART: Objection, Judge. Counsel is testifying.

MR. TRENT: Well, I mean, let me cross -- ask it this way.

THE COURT: Sustained. I'm sorry. Go ahead.

MR. TRENT: I'm sorry.

Q. (BY MR. TRENT) Those organizations that I've listed do say that the symptoms of hyperglycemia --

MR. STEWART: Objection, Judge. Counsel is testifying.

THE COURT: Sustained, sir. It's not in evidence.

MR. TRENT: All right.

Q. (BY MR. TRENT) Do you know what they have to say about hyperglycemia?

A. I know what hyperglycemia is, but I don't know what they say about how it is related to driving impairment.

Q. Okay. Or overall, disorientation, dizziness, confusion, things like that. You're saying -- your testimony under oath is that those things cannot be a symptom of hyperglycemia. Are you going to commit to that?

A. Hyperglycemia is --

Q. That's a yes or no. Are you testifying under oath that hyperglycemia cannot cause those symptoms, dizziness, disorientation or confusion?

A. Dizziness, disorientation, and confusion can be

caused by hyperglycemia. So, we're talking about impairment, driving impaired.

Q. Okay. So, that's a yes.

THE COURT: Why don't you let her answer the question before you continue on.

MR. TRENT: I apologize, Judge.

Q. (BY MR. TRENT) So, you're saying that confusion is not something that can impair a driver, yes or no?

A. When you say --

Q. Yes or no?

A. It can go either way.

Q. Confusion cannot impair a driver?

A. Confusion about what? I can give you a number, and you can get confused on a number. It doesn't mean it affects your driving. So confusion would be --

Q. Okay. Let me ask it this way.

A. Yes.

Q. Are you testifying to this jury, that confusion is not an impairment to drivers, yes or no?

A. Not always.

Q. Not always. How about dizziness, are you telling this jury, that under oath, that dizziness is not an impairment to drivers?

A. Not always.

Q. Disorientation, not an impairment to drivers?

A. Not always.

Q. Well, alcohol is not an impairment to drivers, is it, not always, right?

A. Not always.

Q. And again, so, that we're clear, you cannot tell this jury beyond a reasonable doubt what Warren White's blood alcohol level was at the time he was driving, can you?

A. No.

MR. TRENT: Pass the witness.

REDIRECT EXAMINATION

BY MR. STEWART:

Q. Dr. Guale, let me use the hypothetical counsel just gave you, the start time of drinking at 7:00 o'clock, ending at 8:30, stopping at 9:21, with the blood drawn at 1:00. You said that would be 11 drinks --

A. Yes.

Q. -- to be at a .1.5?

A. Yes.

Q. So, given -- given those facts, what would the blood alcohol level extrapolate back to at the time of driving? I believe the weight that was given was 220 pounds.

A. .21.

Q. I'm not sure I follow that, but.
A. So, you go back to when he was stopped.
Q. No, I don't understand. I mean, you're saying it's impossible for a person to drink enough to be at a .145 four hours later. Is that your testimony, yes or no?
A. Rephrase it again.
Q. All right. Are you saying that it's impossible for a person to drink enough to be at a .145 four hours after the stop?
A. He can't drink that much. It's possible.
Q. He can drink that much, and a person can be under the legal limit under that fact pattern, right?
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Q. I mean, you can -- you can adjust the times of ingestion and the times of absorption depending on the person to where -- I guess my point is, they're not necessarily over the legal limit, are they, at the time of driving?
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Q. Well, these are just hypotheticals.
A. Yeah.

Q. I'm just talking math.
A. Yeah. I know.
Q. Okay. So, it's a follow-up. It is possible for a person to be under the legal limit even if their blood draw indicates .145 four hours later, isn't it?
A. If you're assuming guzzle effect, yes.
Q. Assuming that or other things as well, right? I mean, there are other scenarios in which a person can be under the legal limit four hours later, right?
A. Correct.
Q. Okay. Now, to get to .145, you're saying seven or eight drinks, correct?
A. Correct.
Q. Now, even that is adjustable according to how long they are drinking, right?
A. Yes, sir.
Q. Because even as you're drinking, you're absorbing and eliminating.
A. Yes, yes.
Q. All right. So, I want you to assume for my fact pattern, let's say that ingestion of alcohol begins at 7:00 p.m. --
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ingest -- and I can give you, if you need the weight or anything, I can provide that. But I would like for you to calculate for the jury how much that person would have to ingest to be at a .145 four hours later.

A. Okay. Give me a scenario.

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Q. And let me ask you about that assumption just for a second before you do your calculation. When you say one drink roughly equals .02, are you referring to, when you're talking about mixed drinks, is that one ounce of alcohol?

A. No. It's when we call one standard drink. One standard drink is -- usually, it would have a .6 ounce of alcohol. One standard drink is one beer or one wine which is 5 ounce of wine, or 1.5 ounce of liquor.

Q. 1.5 ounces of liquor.

A. Liquor, yes.

Q. Okay. All right. Go ahead.

A. Okay. So, to calculate this, you know, how much drink the person must have had, I would have to use 0.145 as a concentration of blood and capital gain as grams in alcohol, that person has to consume. That has to be divided. And we're just using a weight mark format, okay. It has to use 220 pounds, I have to change it to a kilogram, which is going to be --

Q. A hundred?

A. -- 100, yeah -- 100 times the witness, with more factor which is .68. That is distribution on a male. That number comes from a mid mark in question. So, and then minus -- I'm going to use the .015 bridge elimination rate for all the times that he's been there. And at the time of the -- the start time would be 7:00, and the draw is 1:00. So, there are six hours in this calculation.

Q. Okay.

A. Okay. We're going to do six times 0.15, 0.015. So, 0.145, plus 0.09 would be 0.235 which equals to A, which is in grams alcohol, divided by .68, which is going to be 68. And so, this will be 6806038. And then A would be, let's see, 80 times .235 is equal to 159

grams, okay, 159 grams. You know, we have to change it into ounce. We have to divide that by, you know, 123.36 ounce, which is equal to 6.84. And then that would be how many drinks? 11.4 drinks.

Q. Okay. So, 11, 12 drinks to get to the --

A. Yeah, because you see, the longer the hour --

Q. Right.

A. -- you know, the higher the number of drinks.

Q. Right. So, if we assume that the blood test is correct, and those other variables that I gave you, that person would have had to consume almost a dozen drinks to get there?

A. Beginning at 7:00 o'clock.

Q. Right. Okay. Now, I think you testified earlier that at a .145, you would expect to see signs of impairment, correct?

A. Correct.

Q. Symptoms like -- you can give them again, disorientation maybe?

A. Yeah. You can feel disoriented and feel dizzy. You can feel, you know, you can have slurred speech.

Q. Okay. And what about motor coordination?

A. Yes, motor coordination can be affected. You can be ataxic or not walking right or stumbling to fall.

Q. Balance can be affected, right?

A. Balance, yes.
Q. Equilibrium?
A. Equilibrium.
Q. Perceptions?
A. Yes.
Q. Now, do you have any -- now, I think you said that your doctorate is in veterinarian medicine.
A. Yes.
Q. Okay. So, animals?
A. Animals.
Q. Okay. Do you have any familiarity with diabetes in humans or the effects of it?
A. Yes.
Q. Okay. Can some of the symptoms that we talked about be duplicated by diabetes or by a diabetic episode?
A. There are two scenarios in diabetic episode. One is hypoglycemia, or where your blood sugar is very low. And the other one is hyperglycemia when your blood sugar is very high. If you suffer from hypoglycemia or a low sugar level, your driving can be impaired. If you have a low sugar level, yes, you can have an impaired driver.
Q. And are you suggesting that that can't be the case with hyperglycemia?

A. No, sir.

Q. You're saying that hyperglycemia does not have any effect on impairment of driving?

A. No, sir.

Q. Really? What do you base that on?

A. Well, because when you think about why is it that you would have dizziness, you know, or week bodily functions, or all of the effects of the driving impairment associated with low glucose, it's because your brain does not get enough glucose. Because your brain does not get enough glucose, it does not perform in the normal functions that is expected to be done by your body. So, it really limits impairment.

Q. So, I mean, whose findings would you put ahead as more authoritative on this subject, your opinions, or the opinions of the American Medical Association, the American Diabetes Association, webmdmedicine.net? I mean, who do you think speaks more authoritatively on the subject of hyperglycemia?

A. What do they say?

Q. Well, they say that it can.

MR. STEWART: Objection, Judge. Counsel is testifying.

MR. TRENT: Well, I mean, let me cross -- ask it this way.

THE COURT: Sustained. I'm sorry. Go ahead.

MR. TRENT: I'm sorry.

Q. (BY MR. TRENT) Those organizations that I've listed do say that the symptoms of hyperglycemia --

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MR. TRENT: All right.

Q. (BY MR. TRENT) Do you know what they have to say about hyperglycemia?

A. I know what hyperglycemia is, but I don't know what they say about how it is related to driving impairment.

Q. Okay. Or overall, disorientation, dizziness, confusion, things like that. You're saying -- your testimony under oath is that those things cannot be a symptom of hyperglycemia. Are you going to commit to that?

A. Hyperglycemia is --

Q. That's a yes or no. Are you testifying under oath that hyperglycemia cannot cause those symptoms, dizziness, disorientation or confusion?

A. Dizziness, disorientation, and confusion can be

caused by hyperglycemia. So, we're talking about impairment, driving impaired.

Q. Okay. So, that's a yes.

THE COURT: Why don't you let her answer the question before you continue on.

MR. TRENT: I apologize, Judge.

Q. (BY MR. TRENT) So, you're saying that confusion is not something that can impair a driver, yes or no?

A. When you say --

Q. Yes or no?

A. It can go either way.

Q. Confusion cannot impair a driver?

A. Confusion about what? I can give you a number, and you can get confused on a number. It doesn't mean it affects your driving. So confusion would be --

Q. Okay. Let me ask it this way.

A. Yes.

Q. Are you testifying to this jury, that confusion is not an impairment to drivers, yes or no?

A. Not always.

Q. Not always. How about dizziness, are you telling this jury, that under oath, that dizziness is not an impairment to drivers?

A. Not always.

Q. Disorientation, not an impairment to drivers?

A. Not always.

Q. Well, alcohol is not an impairment to drivers, is it, not always, right?

A. Not always.

Q. And again, so, that we're clear, you cannot tell this jury beyond a reasonable doubt what Warren White's blood alcohol level was at the time he was driving, can you?

A. No.

MR. TRENT: Pass the witness.

REDIRECT EXAMINATION

BY MR. STEWART:

Q. Dr. Guale, let me use the hypothetical counsel just gave you, the start time of drinking at 7:00 o'clock, ending at 8:30, stopping at 9:21, with the blood drawn at 1:00. You said that would be 11 drinks --

A. Yes.

Q. -- to be at a .1.5?

A. Yes.

Q. So, given -- given those facts, what would the blood alcohol level extrapolate back to at the time of driving? I believe the weight that was given was 220 pounds.

A. .21.

Q. Okay.

MR. STEWART: Pass the witness, Judge.

MR. TRENT: No further questions.

MR. STEWART: Nothing further, Judge.

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All right. Call your next witness, sir.

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MR. TRENT: Can you give me just a minute?

Q. Okay.

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ingest -- and I can give you, if you need the weight or anything, I can provide that. But I would like for you to calculate for the jury how much that person would have to ingest to be at a .145 four hours later.

A. Okay. Give me a scenario.

Q. Drinking begins at 7:00.

A. 7:00 start time, okay.

Q. Ends at 8:30.

A. Okay.

Q. Time of stop 9:00 p.m., time of blood draw 1:00 a.m., and the person weighs 220 pounds. I don't know if that affects it or not, but I'll give you that.

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VOLUME 1 OF 1 VOLUMES
TRIAL COURT CAUSE NO. 1999133

THE STATE OF TEXAS	)	IN THE COUNTY CRIMINAL
	)	
	)	
	)	
vs.	)	COURT AT LAW NUMBER FIVE (5)
	)	
	)	
DANIEL BRYANT IMRECKE	)	HARRIS COUNTY, TEXAS

EXCERPT TESTIMONY

On the 27th day of January, 2016, the following proceedings came on to be held in the above-titled and numbered cause before the Honorable Margaret S. Harris , Judge Presiding, held in Houston, Harris County, Texas.

Proceedings reported by computerized stenotype machine.

APPEARANCES

Ms. Maegan Latrice Williams
SBOT NO. 24088647
Mr. Gilbert Goss Sawtelle, IV
SBOT NO. 24073611
Harris County District Attorney's Office
1201 Franklin
Houston, Texas 77521
Telephone: 713-274-5800
Attorney for The State of Texas

Mr. Tyler Ashley Flood
SBOT NO. 20432057
Tyler Flood & Associates, Inc.
1229 Heights Blvd.
Houston, Texas 77008
Telephone: 713-224-5529
Attorney for Daniel Bryant Imrecke

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VOLUME 1

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January 27, 2016

ALPHABETICAL WITNESS INDEX

EXHIBITS OFFERED BY THE STATE

EXHIBIT	DESCRIPTION	OFFERED	ADMITTED	VOL.
A	Retrograde Alcohol Extrapolation Report	16	18	1
19	PowerPoint - Alcohol Analysis by GC Headspace	63	63	1
20	HCIFS Laboratory Report	77	138	1
21-26	HCIFS Gas Chromatogram	109	109	1
22	HCIFS Gas Chromatogram	162	162	1
22	HCIFS Gas Chromatogram	162	162	1
26	HCIFS Gas Chromatogram	162	162	1
24	HCIFS Gas Chromatogram	162	162	1
25	HCIFS Gas Chromatogram	162	162	1
26	HCIFS Gas Chromatogram	162	162	1

EXHIBITS OFFERED BY THE DEFENSE

EXHIBIT	DESCRIPTION	OFFERED	ADMITTED	VOL.
3-9	HCIFS Gas Chromatogram	83	83	1
3	HCIFS Gas Chromatogram	143	143	1
4	HCIFS Gas Chromatogram	143	143	1
5	HCIFS Gas Chromatogram	143	143	1
6	HCIFS Gas Chromatogram	143	143	1
7	HCIFS Gas Chromatogram	143	143	1
8	HCIFS Gas Chromatogram	143	143	1
9	HCIFS Gas Chromatogram	143	143	1
10	HCIFS Gas Chromatogram	143	143	1
11	Chart	98	98	1

THE COURT: Raise your right hand.

(Witness sworn)

THE COURT: Great. Come on up here. We're going on the record, outside the presence of the jury, in the State of Texas versus Daniel Bryant Imrecke, on a Gatekeeper Hearing with regard to certain testimony of this witness that's being proposed by the State.

Ms. Williams, please proceed with regard to this scope. Thank you.

MS. WILLIAMS: Yes, Your Honor.

FESSESSEWORK GUALE,

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MS. WILLIAMS:

Q. Could you please introduce yourself?

A. My name is Fessessework Guale.

Q. And what is your occupation?

A. I'm a forensic toxicologist.

Q. What are some of your responsibilities in that position?

A. I work for the Harris County Institute of Forensic Sciences. I am the Analytical Operations Manager of the toxicology section. I manage the day-to-day activities of the lab; I supervise the

employees. I make sure the cases that we received took the regular testing dictated by the SOPs, and I make sure all the work is done, and the case is signed out.

Q. Okay. And how long have you been so employed?

A. Nine years.

Q. And so, what type of background do you have -- scratch that.

What type of educational background do you have?

A. I have a degree of the Doctorate of Veterinary Medicine, and I also have a Master's Degree in Toxicology. And I'm double-board certified, one, by the American Board of Veterinary Toxicology; and another one by the American Board of Forensic Toxicology.

Q. And in your current position, have you had an opportunity to participate in any studies or to publish any of your own work?

A. Yes, I have published.

Q. And would you mind describing some of those publications, and what they were regarding?

A. The latest -- the previous one, it will be -- I have a couple of publications on Method

Development, that means analytical methods, how to do testing. And then latest published method that I have is Screening Method for Designer Drugs Using State-of-the-Art Instruments such as TOF.

Q. Okay. And so, let's discuss a little bit about blood analysis. What role do you play in regards to blood analysis, in terms of the alcohol -- I'm sorry, the ethanol concentration?

A. We do have a lot of internal trainings and external trainings about, you know, alcohol analysis; what are the commonly, you know, state of the art methods that we employ in our laboratory.

We use gas chromatography, which is the latest -- or the standard for alcohol. And we implement the latest method. And we do have a high standard of quality because we're accredited by two accreditation boards, that we're required to perform certain standards, which is the highest standard, and we implement those.

And we do train our analysts very well, and they are competent in performing the job. They do have an excellent proficiency to do; internal proficiency to do, and they are very competent individuals. And we stand by our work, with the high-quality work.

Q. Okay. And so you mentioned the individuals who do the actual analysis, as far as -- so you have your analyst do the analysis, what role do you play in regards to that?

A. Mostly in the training. I write the SOPs, The Standard Operation Procedures, and train analysts.

Q. Okay. And so, throughout your training and through some of your research and experience, did you receive any training or education regarding the impact of alcohol on the body?

A. Yes.

Q. And what kind of training and education have you received on that subject?

A. When you do -- when I was in veterinarian college, we do have a course, a toxicology course. And that course -- in that course, you learn about the effects of drugs, chemicals, everything, including air and the water. And when you do a Master's in Toxicology, you're focusing on the toxicity of every drug and alcohol and intoxicants in the environment, and every intoxicant which is on the face of the earth. So, one of them is alcohol, which is actually a C-plus chemical on earth. So, I learned -- or we learned deeply about the effects of

alcohol, then, when I was doing my master's. And, actually, on the workforce, that's practically applying what I learned there.

Q. Okay. And so, in your experience is there -- we understand that when you're analyzing the blood for ethanol, that analysis is done from the time of the blood draw. Is there any way to determine what that individual's ethanol level or blood-alcohol concentration may have been at the time that they were driving?

A. Yes.

Q. And what is that called, or how do you do that?

A. It's called "extrapolation." So, the first thing that you need is all their information. The first thing in your alcohol analysis -- or you have to know what level of alcohol is in that person's blood at a certain time. And then, for that, you need the demographic information of that person; that includes weight, height, the gender -- male or female. And then, whether they ate or not ate that day, all those informations are vital. And you just plug that into a formula, which has been established since long time ago.

Alcohol has been studied for more than

a hundred years. There's a formula derived -- a published extrapolation formula, you plug that information in that formula, and then the formula will tell you -- or calculate it for you, at what time and what level the alcohol would be in the person's system.

Q. And so, you mentioned some of these publications, and you described that there's a formula. Can you explain to us a little bit more about that formula and, kind of, how it works in determining -- you gave it to us, you know, broad, but just -- can you describe the formula a little bit more?

A. The original formula -- all the other, you know, little formats are done; it's called "The Widmark Formula." And that's, actually, it's a pharmacokinetic study. The way they study it is, they will give a person a certain amount of alcohol, and then they will monitor how much would be in the system by taking the blood at the certain period of time, and then make a calculation. You know, how much is absorbed, and how much is eliminated at what rate. So, that formula is derived from experimental studies so that we can use it now.

Because as any medication or as any

food or beverage that you are taking in, the body is going to absorb it, like, alcohol is going to be absorbed. The body will be absorbing it, and it will be distributed all over your body through the blood. And then, once it's distributed through the body, and then, it goes through metabolism, that means it changes by the liver. The liver has got enzymes to break the drug down. And then, it will eliminated at a certain rate by, you know, urine and breath and other sources of elimination.

So, all these are a hundred year's worth of experiments to derive that formula. And so, you just plug in the weight and all the demographic data and the times, and it will calculate it for you.

Q. Okay. And so within your agency, once you receive that information, you mentioned you plug it into something?

A. Yes.

Q. And what is that program called?

A. There's a software called "BAC-Tracker Software," where all these intricate formulas are put together so that the user can just put that information in. It's a very simple arithmetic. Like, it's just like using a calculator. You know, the formulas are plugged into the calculator, and the

software has got those formulas plugged in in there, and the software just calculates it out for you. But you have to put the information that needs to be put in. So, that's a software that we use instead of using a manual calculation and taking a lot of time. The software just calculates it for you; so, we call it BAC-Tracker.

Q. Okay. And so let me give you a hypothetical --

A. Okay.

Q. -- so we can test this. And I believe you mentioned you needed some variables?

A. Yes.

Q. And amongst those variables, do you need weight?

A. Weight, height, gender, what time the person start drinking, and what time the person stopped drinking. What time was the blood draw, whether the person was eating or no eating, when you know, drinking, and what time of the incident.

Q. Okay. So, let me give you a hypothetical now. I have a male about, maybe, around age 30, 180 pounds, six feet. The time of the blood draw was at 2:36 a.m. The time of the stop was at 1:41 a.m. The breath results -- sorry, the time of the first drink

was 6:00 p.m.; the time of the last drink was 12:00 a.m. and the blood-alcohol concentration was a .136. Given that information, would you be able to make an educated determining of what the extrapolation could be?

A. Yes. Can I have my copy?

MS. WILLIAMS: Your Honor, may I approach the witness?

THE COURT: Yes.

Q. *(BY MS. WILLIAMS)* All right. So I have here what's been marked for demonstrative purposes as State's Exhibit No. 5.

THE COURT: Excuse me, you already have a State's Exhibit No. 5 in evidence. And so, why don't we give it a different number, if you'd like, an "A," a letter, so that we know to distinguish it.

A. So, based on the information that you --

MS. WILLIAMS: Okay. So, it's going to State's Exhibit A?

THE COURT: Yes.

Q. *(BY MS. WILLIAMS)* So, you have in front of you State's Exhibit A marked for demonstrative purposes. Do you believe this would aid the Court in understanding what you're about to explain?

A. Yes.

Q. Okay.

MS. WILLIAMS: Your Honor, at this time, I would like to move that State's Exhibit A be introduced into evidence for the purposes of this hearing.

THE COURT: All right. So, are you going to show it on the overhead or what?

MS. WILLIAMS: Yes, Your Honor, I'll show it on the overhead.

THE COURT: Okay. Is there any objection for purposes of this hearing?

MR. FLOOD: Well, I'd object because it's based on information -- two objections. One, it's based on information that's not presented in evidence. Specifically, the height and the weight of the individual, which are factors that the witness said she needed to make this calculation.

And two, that when asked if she could make this calculation, she needed to look at the computer program printout in order to do so. And, I think, the purpose of this hearing is to question the witness' personal knowledge and ability to be able to do it and explain it to the Court and not rely on a computer-generated printout. But my main objection

is, this is assuming hypothetical facts that were not admitted in evidence.

THE COURT: And to that objection your response is?

MS. WILLIAMS: Your Honor --

THE COURT: I didn't recall that testimony either.

MS. WILLIAMS: Your Honor, we were using this solely as a hypothetical to explain the science behind the retrograde extrapolation. And so, right now, it's solely a hypothetical.

THE COURT: Okay. Let me ask this: If we don't have that in evidence -- and I'm guessing the analyst and this witness don't know the defendant to be able to give that information, how is this relevant in our trial?

MS. WILLIAMS: Your Honor, the officer, is currently on recall. And so, we would need to recall the officer to have that testimony entered on the record.

THE COURT: The officer's here?

MS. WILLIAMS: I can get him here.

THE COURT: Well, considering we're supposed to be starting with the actual trial in front of the jury right now unless he's here when the

jury comes out, it's not going to work out so well for you.

For purposes of this hearing, just to try to move forward, I'll allow this exhibit. But I can promise you, that if you're not able to prove up the *Mata* factors, then, it's not coming in.

MS. WILLIAMS: Yes, Your Honor.

THE COURT: All right. Proceed, please.

MS. WILLIAMS: Your Honor, I have an additional copy of that report, would you like me to publish the actual State's Exhibit A or use a duplicate?

THE COURT: Yes, I would.

MS. WILLIAMS: May I approach the witness?

THE COURT: It doesn't matter, either one. Just -- let's go.

MS. WILLIAMS: Okay.

Q. (BY MS. WILLIAMS) All right. Dr. Guale, can you please -- you mentioned that you entered it into a program called "BAC-Tracker"?

A. Yes.

Q. And that offers you an analysis of what the potential breath -- blood-alcohol concentration could

have been at the time of driving?

A. Yes.

Q. Can you please point to -- using the exhibit -- point to where that is on the exhibit?

A. It's right here (indicating). BAC at grams per deciliter at the time of interest, which is 1:41. The BAC would have been .152 with a range being 0.012 of uncertainty.

Q. Okay. And --

THE COURT: What is the last part?

THE WITNESS: This is a range plus/minus the .152. So, to give with that certainty, it could be plus 152, 0.012, or minus 0.012. So, it's giving you a range. It's not a single point. It's giving a range plus/minus .012.

Q. *(BY MS. WILLIAMS)* Okay. And so -- now that we're able to look at this document, you mentioned certain formulas were mentioned to make this determination. As far as this analysis, what formulas were used?

A. For this one, I used all the formulas, that's the standard way of doing it. To give the defendant the benefit of the doubt, you use all formulas, and that would increase the uncertainty. That way, the range will be bigger. So, I used all

these, six formulas.

And the difference is really, really very small. But, you know, when this comes to the numbers, it may be significant. So, I used all these formulas, and the software uses the uncertainty with each formula and gives you the range.

Q. And you mentioned that you used all the formulas?

A. Yes.

Q. And what does that mean in terms of how this number came be -- does it mean that each formula is different, or is there a certain constant that's different amongst the formulas?

A. Yes. The constant amongst the formulas is probably the first -- the Widmark would use only the weight, but the other would consider, you know, the sex. And the other one would consider the body mass index, which is different from using a weight. The other one will put the body mass index, and the differences are listed here, actually. If you look at them, right here (indicating) are the differences.

So, in the Widmark, the volume of distribution is .68; the Watson is .67; the Forrest .72; the Seidl is .77; the Ulrich is .74, these are the differences. And Posey-Moz one, is the latest

one where it becomes .718.

So, if you look at this, the difference is very very small, but when you increase the variables, your uncertainty becomes larger. That means you get a very large range, which gives, you know, the benefit of the doubt larger, not smaller. If I use only one, the uncertainty would be narrower. So, this is to give the benefit of the doubt for the defendant. Use six formulas; have a larger range, and see where the extrapolation comes in.

Q. Okay. And so, the formula that the BAC-Tracker uses uses all those formulas?

A. Yes.

Q. Why does this program use all of these formulas instead of choosing one or the other?

A. The same reason I exactly say, because to increase all the variables. Like, everybody is different: the weight is different; the body mass index, because of the proportion between fat and water in your body that comes, you know, the six differences. And all the other variables are included in here; so, there's no variable untouched. That's why, you know, it's better to use all of them -- to include all of the variables.

THE COURT: Excuse me. I have a

question. I'm just going to jump in.

How can you use the one that requires the BMI, since we don't have that?

THE WITNESS: It's from the weight.

THE COURT: It guestimates it from --

THE WITNESS: From the weight, yes. That formula has got a factor to give a range of BMI for that weight. So, that's one of the formulas that included in there.

THE COURT: So, even though others include the height and weight, that one then makes a guesstimate from those?

THE WITNESS: From the formula.

THE COURT: And which one is that?

THE WITNESS: I think it was Seidl that would have the BMI measurement. I have the scientific published paper that I just give to counsel.

THE COURT: Okay. If we gave you a calculator, would you be able to do one of those equations with the information you're given without using BAC-Tracker?

THE WITNESS: I could only assume elimination. I could plug in this number and calculate to backtrack the number.

THE COURT: No, not using this.
THE WITNESS: Yeah, I can do manual calculation using this formula.
MR. FLOOD: Judge, just to clarify, we had a conversation in the back. Her calculations -- and correct me if I'm wrong -- are based on Mr. Imrecke already being in the elimination phase. And one of the other variables is very important is the time of eating and what was eaten. The testimony was only: he had lots of chips and some sandwiches. So, even if the officer's brought back, they're not going to be able to fill in that factor. And she's included a 27-minute time of absorption.
THE COURT: Is this an objection or --
MR. FLOOD: I just -- I have this --
THE COURT: You will get to cross.
MR. FLOOD: It's a question, though, that she told me she can use the formula assuming elimination; but cannot calculate it without BAC-Tracker if he was still in the absorption phase. And that's why -- it just helps save time because she -- so -- I mean, I guess, I'll just stick with cross.
THE COURT: I am curious, because, at one point, I wrote down that it was important -- and I remembered this anyway -- to know what they ate and

when; is that correct?
THE WITNESS: Yes, you can plug in this.
THE COURT: What if we don't know?
THE WITNESS: You take an average. If you don't know, you take an average.
THE COURT: An average of what?
THE WITNESS: There are absorption constants that are plugged into the formula.
THE COURT: So, we're supposed to assume something so we can get a range.
THE WITNESS: Yes. Like for instance --
THE COURT: Excuse me. Which is exactly what *Mata* says you can't do, isn't it?
MR. FLOOD: That is correct, Judge. Can I just read you that one section?
THE COURT: No, I remember it. I'm asking them.
MR. FLOOD: That's correct, Judge.
THE COURT: It sounds like your witness is doing, precisely, what *Mata* told us that we cannot do. And that's, guesstimate an average. Have y'all read that recently? maybe? *Mata*?

MR. SAWTELLE: I've read it.

THE COURT: Recently?

MS. WILLIAMS: Your Honor, with regard to the constant, right, whether the slow or fast absorption rate -- you're asking us whether she can guesstimate that average; is that what the question was?

THE COURT: I don't want guesstimations. I want a scientific calculation based on factors that our higher courts have told us are required before we're allowed to do this. And my recollection is that the whole issue in this -- am I remembering that the analyst was named McDougall or something --

MR. FLOOD: That's correct.

THE COURT: Yeah, that's it. -- and he testified to, Well, depending on these things that I don't know, it could be anywhere from this to this. And they said you can't do that under our law. And they would not allow it. And they set out the factors that are required.

And that's why I'm asking y'all if you've read *Mata*, recently, before this hearing?

MS. WILLIAMS: No, Your Honor, I didn't. But I was asking in regards to the constant.

THE COURT: I got that. And, yet, I'm stuck on my issue here. And this is what y'all are going to have to answer to get past this hearing. I'm trying to help you out by pointing to where I'm having a difficulty. So, I'm going to take a couple minutes of recess and ask you to read *Mata*. You can borrow this one, and I'll look at my copy.

Do y'all want to read this? I'm offering it to you.

MR. SAWTELLE: We have it.

THE COURT: Perfect.

MR. FLOOD: May I say one short thing with respect to *Mata*?

THE COURT: If you must.

We're on the record, folks.

MR. FLOOD: There's an interesting piece of language in there talking about averages and absorption rates. And it says absorption and burn-off rates are highly variable in each individual. The, generally, accepted burn-off rate is about one beer per hour -- and it quotes, "average man." And *Mata* states, "However, the 'average man,' like, the average family with 2.4 children doesn't" --

THE COURT: Are you pointing out "one

little thing," or giving an argument? Because it sounds, suspiciously, like an argument. So, I'm to ask you to hold onto that.

MR. FLOOD: Okay.

THE COURT: And I don't want conversation in this courtroom right now. I want them reading this case so they can answer my question.

MR. FLOOD: Yes, ma'am.

(Brief pause)

THE COURT: Have you had a sufficient opportunity of time to read this now?

MS. WILLIAMS: Yes, Your Honor. And before I discuss it -- quickly clarifying your concern so I can make sure that I understood it. Your concern was: Regarding the *Mata* facts, and whether or not the expert should be allowed to make estimations as to those factors?

THE COURT: Correct.

MS. WILLIAMS: I understand.

In regards to the weight and height, right now we wouldn't be able to give that in terms of trial unless the deputies were given the opportunity to come back. In terms of this hearing, in the hopes that they will get time to get back --

THE COURT: Why don't you ask the expert about those *Mata* factors, and whether she agrees if they're important.

MS. WILLIAMS: Yes, Your Honor.

Q. (BY MS. WILLIAMS) Let's discuss some of the factors and variables that are necessary to make a determination of whether you can extrapolation. Let's discuss the length of time and the time of the offense, is that something you find important?

A. Yes.

Q. Okay. And why?

A. The incident time and the time of the blood draw, we're talking about?

Q. Yes, ma'am.

A. So that is what's -- both are important for the calculation to work. Because you have a certain amount of alcohol at a certain amount of time, that's what the software uses to back extrapolate to the incident time, using also the first drink and the last drink; and it just makes a curve of those values and to see where that would be, whether that person was absorbing, would be absorbing, or eliminating. So, it will calculate that. So, it's very important for those points to be made. Otherwise, it will not work.

Q. Okay. As far as this extrapolation, were you given that information?
A. Yes.
Q. And let's discuss some other individual characteristics. Is it important to know the subject's weight?
A. Yes.
Q. And why?
A. Because the formula uses the weight in the distribution factor to see how the dose will be distributed at a given time. So, you have to have the weight plugged there, without the weight information the formula would not work.
Q. Without the weight information, why wouldn't the formula work?
A. Because of -- depending on -- alcohol distributes throughout your body depending on your weight and the amount water and the fat quality. A person who is drinking one drink and is a very small person, the alcohol is going to be distributed in a very small area. So, the concentration would be higher as compared to the person who drink one drink and then the alcohol is distributed all over that area, and the concentration would be small.
So, it would not be fair to assume a

small person and a large person would have the same concentration at the given time. So, the formula has to have that weight to determine at one time, that the alcohol concentration would be, that depends on the weight.
Q. Okay. And what about how much somebody has eaten, is that considered an important factor?
A. It is an important factor, in a sense. If you eat food, and it is actually absorbed -- and it is the type of food that you eat, can slow the absorption. Like, it's not the same as drinking alcohol on an empty stomach.
Like, if you eat steak, for instance, it's very proteinous. It's very areawide; it sits there in your stomach. So, the alcohol with that steak is not going to be moving into the intestines, as fast as the empty stomach with only the alcohol, that moves faster into the intestines.
So, that's what the difference is. Because it has to compete for absorption, you know, site. That's why it's a smaller moving -- or emptying. Your bowel empties that slowly, because it has to digest that meat; and at the same time, the alcohol is still in there. So, that's why it slows the absorption. So, at a given time, if a person

drinks a drink, one drink, without food it will go, probably, 30 minutes.

Within 30 minutes, that alcohol would be absorbed. But if a person just had steak before he drinks, it may take an hour or an hour and a half for that alcohol to be absorbed into the system. So, it's very important to have that fact.

THE COURT: Let me ask a question: So, if you don't know when someone ate food and what they ate at that time, it affects your ability to accurately extrapolate?

THE WITNESS: If you know exactly, the software allows you to put that information. If you know exactly what time, you can put that information.

THE COURT: No, that's what I'm telling you: If you don't know those things.

THE WITNESS: If you don't know the time or the steak, then, you just have to use the average.

Q. *(BY MS. WILLIAMS)* And by average, you're referring to the constant we see at the bottom?

A. Yes.

Q. That slow absorption rate and that fast absorption rate?

A. Yes. This is the slow absorption rate.

This is the factor that the computer will use. And fast absorption rate, this will be at 6.5. But this is -- you can put one, up to eight in here (indicating) for -- if you have some information, and you know for sure the person ate a steak before the alcohol -- or while he's drinking, you can put one here (indicating) and one here (indicating), and calculate the whole thing with a slow absorption. And -- or you can choose, depending on the information you have.

Q. Okay. And so to clarify, that means you do need to know that they ate?

A. Yes.

Q. But do you need to know, necessarily, need to know the exact time to use your calculation?

A. Not really. It's during the course of, you know, your drink you can either have it at the beginning or at the middle. It will not have that much of a significance, as long as they're eating, you know, the absorption is going to be slow.

Q. Okay. Can you just briefly explain why not knowing the time isn't that significant in terms of making that determination?

A. Because you may have, like, for instance, you drink -- you go out to the bar, and you start

drinking a couple of drinks, and then you start eating; you may have absorbed that much faster on an empty stomach. And then, you eat, and then you start drinking; and then, it's going to be slower. It will not have that much of a really, really a significant effect on the total, when you look at it, in general, the course of the time. For that particular time, yes, but when we're looking at the general area under the curve, it doesn't have that much of a significance. But if you know and you calculate it with slow absorption, you know you're giving the benefit of the doubt to the defendant.

Q. Okay. And in this particular case, were you given facts concerning whether the hypothetical individual had eaten or not?

A. Had eaten?

Q. Yes.

A. Yes.

Q. And so, let's discuss the importance of knowing the first drink. Is that something that's considered important in regards to extrapolation?

A. Yes.

Q. And what about knowing when the last drink was?

A. Yes, both are important. Because you can

constract this curve; that makes it more accurate. Yes, you can do extrapolation without that information, but it would be less accurate.

Q. Okay.

A. But we have here, the start time and the stop time and every information, so that would make it accurate.

Q. And how would that time interval make it more accurate?

A. Because from the total time -- because you have the end time here, what the concentration is, and the software can calculate how many drinks that that person should have drank to get to that level. This is the established fact through pharmacokinetics.

So, once it calculates, it will give you each time. If you look at this first, through all numbers, the time in 24 hours, it will give you at 18:00 there was zero alcohol; 18:20 there was .13 alcohol. It gives you all the numbers at each hour, and then you can tell, you know, at what time.

THE COURT: Can I look at your copy?

THE WITNESS: Yes.

THE COURT: Thank you.

A. So, this is why it's important; it makes it

more accurate.

Q. (BY MS. WILLIAMS) Okay. And so -- and correct me if I'm wrong. Through the different formulae that's listed at the top, is it the same equation -- and we're trying to determine the constant that gets applied into that equation; is that a correct understanding?

A. Yes, it's the same formula. The difference is listed here on the volume of distribution. It's the same formula; the volume of distribution is going to be different for each. And then, all of them would have -- because the volume of distribution is different, all of them would have a different -- at a given time, the concentration may be a little different, a little bit, between all these six formulas by each time. So -- but it's the same known Widmark original formula that all these six formulas are built into.

Q. And to address the types of drinks -- or how -- is it important for extrapolation to know how many drinks this individual may have had?

A. Yes, it will calculate it. So, yes, it is.

Q. Okay. And why is that?

A. Because it's -- the formula is actually established based on what a standard drink is. One

standard drink is .6-ounce of pure alcohol. That is, one beer is considered one standard drink, which is 5 percent alcohol. Or one glass of wine, which is 5 ounces of wine is considered one standard drink. And, you know, one and a half shot, which is hard liquor, is considered one standard drink.

So, however, the concentration of alcohol -- how much of the concentration of alcohol it finds in your system, it came from there. So, it will back calculate it. How many drinks that person would have had, or how much of the total grams of alcohol that person would have had to get to this level of alcohol at this time is derived from this formula.

Q. So, have we -- are there any variables that you need in this hypothetical for extrapolation that you didn't receive in order to make an accurate estimation?

A. I have everything from this case.

Q. Okay. So, you have all the necessary information to make an educated --

A. Yes.

Q. Okay. And so, based on that, this is -- would this estimation be accepted in the scientific community?

A. These are all peer reviewed and published formulas. And -- everything here is published, and peer reviewed, so that means that's accepted by the scientific community.

MS. WILLIAMS: State passes the witness, Your Honor.

THE COURT: Mr. Flood, you may cross. Try to remember that the jury has been waiting for 35 minutes again.

MR. FLOOD: Okay.

CROSS-EXAMINATION

BY MR. FLOOD:

Q. So, you need to know -- I noticed on your chart that you presented, you estimated a 27-minute absorption time, correct?

A. Yeah. Based on the area under the curve, you have to give it -- after the incident, it was additional 27 minutes that the person was absorbing.

Q. Right. So, it's common knowledge, and you testified that a person can still be absorbing, meaning rising, from 30 minutes, up to two hours and even beyond two hours, right?

A. If you stopped drinking at that incident time. Like, if he just stopped drinking at the incident time which 1:41, right? The incident time

is 1:41, where we go back and extrapolate to; and then you can give it two hours just for absorption, after that.

Q. Right. So, the time of the last drink that you used here was 12:00 o'clock?

A. Yes, that's what is given to me.

Q. And then, you said that he would have stopped absorbing at 12:27?

A. Yes.

Q. That's what this is, military time, right here (indicating)?

A. Yes.

Q. Okay. So, you're only allowing 27 minutes for him to absorb, correct?

A. I didn't --

Q. The program did.

A. -- the computer allowed it to go that way. Because depending on how much drinking -- he started -- based on the start time, like, he started at 6:00 o'clock, right, 6:00 p.m.? And then, he stopped at 12:00. So, what -- when the computer plugs in, and then, the concentration of the blood, you know, the blood value, it would calculate how many drinks that would be. And it gives it the same rate for all those hours. That means the person

should have been absorbing for about 27 minutes for all the drinks that he was drinking. That's why it was going only 27 minutes, based on the area under the curve.

Q. So, you're making a lot of assumption to plug this number into this computer program, right?

A. This is partly the facts that I'm given. I just put it in there, it just plugged it into the formula, and the formula gives that out.

Q. Like, you need to have the weight you put in?

A. Yeah.

Q. And you didn't do this calculation on your on, you put it into this BAC-Tracker?

A. Yes.

Q. And you let it calculate it?

A. Yes.

Q. And you put in the height that was given to you by the State?

A. Yes.

Q. Time of last drink?

A. Yes.

Q. And so you're -- and you're assuming that there was, like an even, perfectly spread-out-drinking pattern over the six hours of the

time period the State gave you, right?

A. Yes.

Q. But you don't know that, personally, to be true, right?

A. No.

Q. Do you know the alcohol concentration of the beverages?

A. No.

Q. And that's an important factor, that from all the peer-reviewed literature, that's something to take into consideration when doing extrapolation, right?

A. No, what you need to know is what's in the system. How much alcohol was in that person's system.

Q. Right.

A. It doesn't matter how many drinks. It will calculate it automatically for you. But what you need to know is how much it was at one time, and when does that person start drinking, and it would automatically draw it to you.

Q. Exactly. So, if there's a drink with higher alcohol -- you said you need to know how much alcohol is their system?

A. We know how much alcohol is in his system,

that's what the starting point is, we know that.

Q. Okay. Well, the information you were given was three drinks over six hours?

A. The number of drinks really, really doesn't matter.

Q. Okay. It doesn't when you're trying to figure out the drinking pattern to do extrapolation, right? If a person drank more towards the end, that would affect their absorption rate, correct?

A. Correct.

Q. Okay. And you don't know that factor, you're assuming an average absorption rate, right?

A. Yes.

Q. Okay. And even though a person can be absorbing for up to two hours here -- so, you can do an extrapolation, provided the person is in the elimination phase, correct?

A. Yes.

Q. Okay. Here you don't know about what he ate, right?

A. No.

Q. Okay. So, with 27 minutes allowed for absorption, that's assuming he was drinking on an empty stomach, did you factor that in?

A. What -- the factor that I use is average.

Q. Okay. So here's the averages down here at the bottom.

A. Yes.

Q. This is different absorption rates?

A. Yes.

Q. Right?

A. Yes.

Q. Slow would be a 2.5 -- and this isn't, like, hours or anything, right?

A. No, it's the half-life -- would come with the first order of absorption. The half life would be the alcohol absorption.

Q. This one (indicating) would be 6.5, right?

A. Yes.

Q. Okay. But you don't know what his absorption rate was, correct?

A. No, just -- the computer assumes the average.

Q. Okay. I'm going to try to ask just yes-or-no questions, so I can conclude the hearing faster --

THE COURT: Thank you.

Q. *(BY MR. FLOOD)* -- if that's okay with you?

A. Sure.

Q. Did you know what his absorption rate was

to plug into the computer program?
A. No.
Q. All right. So, you used an average absorption rate, correct?
A. Yes.
Q. Okay. If you used a slow absorption rate, then this number would be different, correct?
A. Could be, yeah.
Q. And it could be up to two hours, correct?
A. It's my experience that two hours -- I haven't seen, even with the slowest absorption, the maximum I saw is one and a half hours.
Q. Okay. You've given me peer-review articles. You have Garrote [phonetic] here, which I know you're familiar with.
A. Yes.
Q. It's a treatise on -- do you want me to show you all the literature that talks about how a person can be absorbing for two hours or more?
A. No, no, no, I know about that.
Q. So you're --
A. I know the literature says that, but this --
Q. I'm not asking what you have seen. I'm asking what the scientific community agrees to.

A. Correct. You're correct.
Q. A person can be absorbing for up to two hours or more, right?
A. Yes.
Q. And that depends on certain variables that you don't know in this situation, right?
A. Yes, correct.
Q. But in this case, if he was absorbing for two hours, then this number right here (indicating) would be different, correct?
A. The peak time, yeah, would be different, yes.
Q. If you used midnight as the time of the last drink, then this would be 2:00 o'clock?
A. 2:00 o'clock, yes.
Q. Okay. And the time of interest, which you say right here (indicating) is 1:41?
A. Yes.
Q. So, he would still be absorbing. If you knew those variables, instead of guessing an average, if you knew that, this -- he could still be in the absorption phase at the interest time, right?
A. Could be.
Q. And so -- but you had to put in variables into that program that are assumptions, correct?

A. Correct.
Q. Correct. Now, I don't know if you read that *Mata* case, but I know you're familiar with the variables needed to do a proper extrapolation, correct?
A. The one that I just used.
Q. Okay. Are you also familiar with the strong warnings and cautions about trying to predict a BAC when the person is still in the absorption phase? Do you know the difficulties associated with that?
A. Yeah, it could be variable, we know that. It could be variable.
Q. In fact, all of the peer-review literature puts extreme caution on even attempting to extrapolate, when a person is in the absorption phase, right?
A. Yes, it could be variable. I agree.
Q. So, you said to me, that you can calculate the Widmark formula if you know the person is already eliminating, right?
A. Yes.
Q. Okay. And that's based on this 27-minute absorption phase?
A. Yes.

Q. Which is even lower than 30 minutes, which is commonly referred to as the fastest a person could absorb, right?
A. Fastest is 15 minutes, actually.
Q. And that's based on some average between those two numbers here (indicating) that we're just guessing at, right?
A. Yes.
Q. So, the person -- if Mr. Imrecke was, in fact, still in the absorption phase -- going up -- you can't calculate that, can you, manually? You would have to use that BAC-Tracker to calculate that, right?
A. I would say because it has the logarithms of this number and that number at specific times, so it would be really long for me to calculate that, where you have a calculator right there.
Q. And I asked you about this. You would have to use this BAC calculator to figure that for you, right?
A. If I know the person is absorbing, yes, I will let the BAC-Tracker calculate it for me, instead of me trying to calculate it.
Q. And generally, it's not common practice for any lab professionals or colleagues to attempt to

extrapolate back into the absorption phase, right?
A. Correct.
Q. Okay. It's fraught with difficulties, and you're well aware of that, right?
A. It's just -- only because you cannot do the uncertainty and all those assumptions -- variable assumptions that, you know, we cannot just go and just calculate it.
Q. Okay.
A. It needs to go through some logarithmic calculations, you know, additionally, with absorption constant. See, for the elimination, because there is a constant rate, it's very easy to calculate that. But while the person is absorbing, this exponential and logarithmic calculations, so -- which -- so, you need a calculator for that instead of you trying to figure it out.
Q. Okay. And you said you would need the computer program to figure it out?
A. Yes.
Q. So, just to summarize, the assumptions you're making are his height and his weight?
A. Those are not assumptions those are facts.
Q. Okay. You need to know information about when he ate to determine his absorption rate?

A. Yes.
Q. And we don't have that here. So, you're assuming an absorption?
A. Yes.
Q. And did you manually pick that and, say, let's just assume this for this calculation?
A. No. I just plug the lowest in and highest in, and the computer will do the average.
Q. The average?
A. Yes.
Q. Not based on facts that we know, just computer average?
A. Yes.
Q. And those are the important factors to be able to give an accurate BAC if the person is in the elimination phase?
A. Yes.
Q. It becomes much more difficult, during the absorption phase, right?
A. It just increases the range; that's all it does really.
Q. The rate of error, right?
A. Yeah. But the rate of error increases, and then your range is going to be increased.
Q. And so, you said you give the benefit of

the doubt to the -- you said "defendant"; I'll call him Mr. Imrecke -- by reporting the lowest BAC from the analysis, right?

A. Yes.

Q. Okay. Well, you gave this wide range of BACs here, right?

A. Yes.

Q. From here to here (indicating on State's Exhibit A)?

A. Uh-huh.

Q. And you reported it to be based on the assumptions .152?

A. Yes.

Q. Well, this isn't giving him the benefit of the doubt, is it? Because if you look at the lowest one -- and this isn't in color -- but I think we determined that this bottom one is the Seidl?

A. Yes.

Q. That is well below .152, and that's not giving him the benefit of the doubt. You're averaging all of these formulas, aren't you?

A. Yes.

Q. Okay. Do you know how to calculate the Watson formula by hand?

A. The Watson formula?

Q. Right here (indicating).

A. Yeah. I mean, like I said, the differences of the -- there are factors that's given over there.

Q. And the Seidl formula, you can write these out by hand --

A. Yeah.

Q. -- and calculate them without the BAC-Tracker?

A. Well, really the formula is already out there. I mean --

Q. I'm asking if you can do this and explain how these formulas work: Ulrich, Forrest, not Widmark, Seidl, Watson, and then one was developed by Dr. Mozayani?

A. Yeah. She just averaged them; that's all.

Q. Okay. You didn't do this calculation; it was just put into the software that y'all purchased?

A. Yeah.

Q. Just plug in the numbers and then you let it generate this report and that's what you rely on?

A. Yeah.

Q. Okay.

MR. FLOOD: I'll pass the witness.

MS. WILLIAMS: Brief redirect, Your Honor, if I may?

THE COURT: I have a question. And I want y'all to address my question after I ask it.

If we were to assume the slowest absorption rate, then what would the extrapolation be for the time of stop at 1:41? Using all your other factors.

THE WITNESS: Yeah. It would be a little bit smaller, but I don't know.

THE COURT: But you can't tell us what?

THE WITNESS: I can't tell you. I'd have to have the BAC-Tracker to change that number on the bottom. Can you pull that one up?

THE COURT: Could you do any of those off the top of your head with a calculator without the BAC-Tracker?

THE WITNESS: With the absorption rate constant, no, I can't. But -- only elimination I can.

THE COURT: So you're telling me, if he was in absorption still, when he was stopped, you can't extrapolate?

THE WITNESS: Manually, no, I cannot extrapolate.

THE COURT: But you're saying this

thing can do it?

THE WITNESS: Yes.

THE COURT: Because it assumes something?

THE WITNESS: Yes.

THE COURT: Questions?

MS. WILLIAMS: Questions of your question, or redirect?

THE COURT: Either one.

MS. WILLIAMS: Your Honor, I do have some questions.

THE COURT: Well, let's make it snappy.

MS. WILLIAMS: Okay.

REDIRECT EXAMINATION

BY MS. WILLIAMS:

Q. I would just like to clarify a few things with you, if you don't mind, Dr. Guale. This number right here, this 27 minutes --

A. Yes.

Q. -- you originally testified that that would be after the time of the incident; is that correct?

A. It would be 27 minutes after the stop of the drink.

Q. All right. And so, in this case, the

report says that the time of the stop was 1:41 --
A. Yes.
Q. -- is that correct?
A. Yes.
Q. And so, originally, defense presented it as midnight; is that correct?
A. Midnight is the time where the person stopped drinking.
Q. Okay.
A. Yeah.
Q. And so, the time of the last drink --
A. Yes.
Q. -- and just so we can clarify, was midnight?
A. Yes.
Q. The time of the stop was 1:41?
A. Yes.
Q. And your paperwork is actually saying he came out of absorption 27 minutes after that stop --
A. Yes.
Q. -- is that correct?
A. And so --
THE COURT: Meaning, 2:08 then? 2:08 a.m., did I do that right?
THE WITNESS: No, before the incident.

THE COURT: Okay. We're all saying different stuff. He thinks you mean 12:27 a.m. is when --
THE WITNESS: It peaked -- he peaked.
MR. FLOOD: Right.
THE COURT: 12:27?
THE WITNESS: Yes, he stops absorbing.
THE COURT: Before the stop?
THE WITNESS: Yes, before the incident, yes. I like to call it "time of interest," 1:41, yeah.
THE COURT: But they think you mean 27 minutes after the stop if I'm understanding correctly. Which is it?
THE WITNESS: No, that's 27 minutes after the last drink, which is 12:00 o'clock.
THE COURT: Okay. So, 12:27 a.m. is --
THE WITNESS: The stop.
THE COURT: -- the end of absorption --
THE WITNESS: Yes.
THE COURT: -- according to this?
THE WITNESS: Yes.
THE COURT: That isn't what you were

just saying, I think.

MS. WILLIAMS: No, Your Honor, I was attempting to clarify. I think we're getting there.

Q. (BY MS. WILLIAMS) Okay. So, that absorption rate, that 27 minutes --

A. Yes.

Q. -- I guess. The questions we have -- where all parties seem to have -- is that 27 minutes after he stopped drinking at midnight, or after he was stopped at 1:41 in the morning, an hour and 41 minutes after his last drink?

A. After he stopped drinking at 12:00 o'clock, 12:27 he stopped absorbing. At the time of the incident, which 1:41, he was eliminating according to this.

Q. Okay. And so, would it be possible, if you wanted, for the benefit of this subject, if you wanted to, could you calculate using the slow absorption rate, and then calculate also using the fast calculation rate?

A. Individually? Yes, I can do that with the software.

Q. So, if we were to say we wanted to do this at the benefit of the defendant -- I'm sorry, at the subject, and do it at the slowest absorption rate,

you can do that with your program?

A. Yes.

Q. And speaking of BAC-Tracker, is BAC-Tracker a program -- in terms of extrapolation, is that something that's accepted within the scientific community?

A. Yes.

Q. And how do you know? How do you know that's accepted within the scientific community?

A. It's published.

Q. There's information published on BAC-Tracker?

A. Yes. There's a manual for it. And then, there's also publications in there, and I gave it to the defense counsel.

Q. Do you think that that might be something that could assist the Court in better understanding the program?

A. Yes. There's a manual for each thing, which the software assumes and doesn't assume. It's listed in there, in the manual.

MS. WILLIAMS: Your Honor, may I approach the witness?

THE COURT: Yes, but it's really not going to help me.

MS. WILLIAMS: You'll find that it's not helpful --

THE COURT: This software isn't helping me on her personal understanding of the equations of the formula, and not just plugging something into a computer. Because it seems like you, or I could data entry -- or enter that data ourselves without understanding a darn thing. And what we have to prove under *Mata* and the other cases, before this goes to the jury, is that she can calculate it without that; that she can explain it. And so, that's why that's not helpful to me.

MS. WILLIAMS: Yes, Your Honor.

THE COURT: And so, the answer we are consistently getting, at this point, is that she could do it with her software. I'm not hearing the other.

So, what we're going to do now is we're going to recess this hearing, and we're going to go into testimony with the jury. And then, we'll have a hearing over lunch. We'll finish this hearing over lunch and decide whether she'll be testifying to the jury after lunch. We have left them for almost an hour, again, in the jury room. And I just find that unconscionable.

All right. So, that was my mistake in thinking we could do this, and I will own up to the jury.

Take a quick break, and then we're going to be starting with the jury.

(Recess taken)

THE BAILIFF: Please rise for the jury. Everybody stand up.

(Jury enters the courtroom)

THE COURT: You may be seated. Let the record reflect that the parties and jurors are present and seated in the courtroom.

Folks, it's on me. I've been trying to finish the hearing that we were doing, and it took a lot longer than I thought. So, again, I apologize for keeping you in the jury room, but now we're ready to proceed with testimony.

Call your next witness.

MS. WILLIAMS: State calls Kimberly Peterson.

THE COURT: Thank you.

THE BAILIFF: Your Honor, this witness has not been sworn.

THE COURT: Would you please raise your right hand?

(Witness sworn)

THE COURT: All right. Come on up.

(Witness complies)

THE COURT: Thank you.

You may proceed.

MS. WILLIAMS: Thank you, Your Honor.

KIMBERLY PETERSON,

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MS. WILLIAMS:

Q. Will you please introduce yourself to the jury?

A. My name is Kimberly Peterson. That's P-E-T-E-R-S-O-N.

Q. What is your occupation?

A. I'm a Toxicologist III at the Harris County Institute of Forensic Sciences.

Q. And what is a toxicologist?

A. A toxicologist performs scientific tests on body fluids and tissue samples in order to determine if there's any drugs or chemicals present in the body.

Q. And how long have you been so employed?

A. I've been employed at Harris County for about a year and a half.

Q. And have you always held this position?

A. Yes.

Q. And so, can you explain what some of the duties are of the current positon?

A. Yes. My primary duty is to analyze the tissue samples and blood for the presence of ethanol or the other volatiles.

Q. Okay. And you mentioned you work for the Harris County Institute of Forensic Sciences, what accreditations does that laboratory hold?

A. We have three accreditations. The first one is the American Board of Forensic Toxicology or ABFT. Another one is the American Society of Crime Laboratory Directors Laboratory Accreditation Board International or ASCLAD/LAB for short. And the third is the Texas Forensic Science Commission.

Q. Now, there -- out of one of those accreditations that you mentioned, one of them is very important. Which one and why is it so significant?

A. Well, all of the accreditations are important. We -- the entire lab is accredited on a national level, a state level, as well as, an international level. And each of these accreditations requires that we follow strict

standards in order to obtain the accreditations from that body, as well as, undergo regular inspections to maintain that accreditation.

Q. All right. So now can you discuss with us your educational background?

A. Yes. I graduated in 2012 with a Master's of Science in Forensic Science from California State University Fresno. And I also, have bachelors' degrees in both biology and anthropology, which I received from Central Washington University in 2008.

Q. All right. And what specific training have you received in the area of ethanol analysis?

A. Since, I've been employed at Harris County I was required to undergo an alcohol training program, and that included performing competency tests, as well as, passing a written examination. Once I completed that, I was considered sign-off and able to participate in proficiency examinations, which are where a third party assigns testing and will review or grade my results.

Q. All right. And do you have any certifications relevant to this area?

A. Yes. I am certified by the American Board of Forensic Toxicology, which is one of the accrediting bodies I mentioned earlier as a

diplomate.

Q. All right. And have you testified as an expert witness in the area of forensic toxicology before?

A. Yes.

Q. And has that been on few or many occasions?

A. Few.

Q. And does that include expert testimony in the courts of this county?

A. Yes.

Q. And so -- just so we can know, about how many blood DWI trials have you testified in so far?

A. I believe this is my seventh time testifying.

Q. Okay. Now, can you explain to the ladies and gentlemen of the jury, the science behind blood-alcohol testing?

A. Yes. So, for blood-alcohol testing at Harris County, we use a method, which is an instrument called the -- I'm sorry, the method is called headspace gas chromatography.

MS. WILLIAMS: Your Honor, may I approach the witness?

THE COURT: Yes.

Q. *(BY MS. WILLIAMS)* I have what's marked for

demonstrative purposes, State's Exhibit No. 19, do you recognize this?

A. Yes.

Q. And do you believe it would aid the jury in understanding gas chromatography and how it works --

MR. FLOOD: Judge, to save time, I'll stipulate to the predicate and admissible, if that's okay.

MS. WILLIAMS: Okay. At this time, State moves to introduce what's previously been marked as State's Exhibit No. 19 into evidence.

MR. FLOOD: No, objection.

THE COURT: State's 19 is admitted.

MR. FLOOD: I'm sorry, I thought they were offering it for demonstrative purposes, and that's what I agree to.

MS. WILLIAMS: We will use it for demonstrative purposes, Your Honor.

THE COURT: Thank you. That is how it is admitted, then.

MS. WILLIAMS: Your Honor, may I publish?

THE COURT: Yes, ma'am.

Q. *(BY MS. WILLIAMS)* Okay. Now, can you began to explain the science behind the blood testing in --

specifically, the gas chromatography?

A. So gas chromatography headspace is the method we use at our lab, and it's the most popular or commonly used method to determine ethanol or blood alcohol in forensic laboratories. It's very sensitive, as well as accurate, and it's, as I mentioned, a way to determine the amount of ethanol or alcohol in a sample.

Q. And has the science behind this been, generally, accepted in the field?

A. Yes.

Q. And has that technique been tested in actual field conditions?

A. Yes.

Q. And has that technique be subject to peer review and publication?

A. Yes.

Q. So, that technique has been accepted within the relevant scientific community?

A. Yes.

Q. And how do you know that?

A. It's considered the gold standard for testing blood alcohol or ethanol, and it's been published in hundreds of articles.

Q. All right. So, can you explain, in the

simplest manner, kind of, how this process works in terms of testing the ethanol in someone's blood?

A. Yes. So, we're able to determine the amount of ethanol in a blood or tissue sample because of Henry's Law in action.

And Henry's Law is just a scientific rule, essentially, that states that at a constant temperature in a closed system or container, there's a relationship between the amount of ethanol or alcohol in the actual blood, in comparison to the space above the actual blood, which is in the picture referred to as the headspace.

And so, that picture shows a vial that we actually would use to test a sample with that closed container; so, we're able to test the headspace and get the amount of alcohol present in the sample.

Q. And since we're looking at a PowerPoint -- and you may have addressed this -- you mentioned headspace, what is headspace?

A. Headspace is just the space above the sample.

Q. Okay. And what happens -- okay. So, can you, kind of, tell us a little bit more about the process of analysis?

A. Yes. I actually have more detail in the future slide, as far as the actual testing. Once the sample is introduced on the instrument -- would you like me to explain that first, or explain the slide that's listed?

Q. You can explain that first.

A. Explain which one first, I'm sorry?

Q. The slide that's listed.

A. Okay. So, this slide, kind of, shows the beginning of our process. So prior to running any samples -- case samples on the instrument, which is shown up there, I will have to do what is referred to as instrument calibration.

And the calibration is -- just consists of six standards, which are from a third party, and they contain a known amount of alcohol in them. And so, what we're doing is we run them on the instrument; and we know that they must fall within a narrow range. So, by running those and knowing that the instrument is able to correctly determine the amount in those standards, we're, then, able to proceed with putting our case samples on the instrument.

Q. Okay. If you need to, you can just tell me when you would like to have the next slide.

A. Okay.

Q. Okay. So, how does your lab receive the blood specimen that is to be tested?

A. So, an officer will bring the sample to our laboratory and give it to one of our evidence technicians; the evidence technicians will then take the sample, which also comes with -- the sample is sealed, and it also comes with paperwork and enter that into our laboratory information system or database. There labels -- there the system will generate a unique identifier for that case, and then it's brought to our toxicology department for testing.

The toxicologist department -- one of the evidence technicians, will then open up the actual evidence, make sure that everything is properly labeled, take pictures of the tubes, and then actually place labels onto the tubes. And then from there, they'll place them into a locked refrigerator, where an analyst, such as myself, will be able to access the refrigerator to perform the testing.

Q. All right. And in regards to these blood vials, does your lab have any special requirements for the blood vials that are submitted?

A. Yes. We would prefer two gray-topped tubes. We also -- we require the correct paperwork is received with the tubes and that the evidence container is sealed.

Q. And how are blood vials tracked, once your lab has taken custody?

A. So as I mentioned previously, our toxicology technicians will label the tubes, and so each of the tubes has a label specific to that case.

In addition to that, every analyst has their -- has a barcode with a unique identifier only known to that individual. And so, when I take a sample into my custody, I will scan that sample, and then enter my barcode, and it's tracked in our information system.

MS. WILLIAMS: Your Honor, at this time may I approach to --

THE COURT: Yes.

MS. WILLIAMS: Your Honor, may I publish?

THE COURT: Yes.

Q. *(BY MS. WILLIAMS)* Looking at State's Exhibit No. 15, do you see that barcode?

A. Yes.

Q. Okay. And from that barcode, are you able

to identify this blood vial?
A. Yes.
Q. And what is that unique barcode?
A. The barcode is what the toxicology technician has placed -- I'm sorry, the evidence technician has placed with that case once it was received by our laboratory.
Q. And what is the lab number associated with this case?
A. It's IFS14-16245.
Q. And how many vials are associated with this case?
A. Two.
Q. And did you analyze the blood contained in this vial to determine its alcohol content?
A. Yes.
Q. And how does your lab ensure that all the samples that are submitted for testing, are tested in the exact same manner every time, every-single-time?
A. We follow a standard operating procedure.
Q. And we spoke of the instrument earlier, was the instrument that you used to test this blood, was it working properly?
A. Yes.
Q. And does that instrument require

maintenance, I think, you addressed it on the previous slide about calibration?
A. Yes. They're -- we are required to do a date-of-use maintenance on the day that I plan to run. We do preventive maintenance, and then as-needed maintenance, as well as yearly maintenance.
Q. All right. And -- like I said, just let me know if you need a new slide. Before testing the samples, what is the first step in ensuring that the instrument and standards are correct?
A. I believe that was what I, kind of, explained previously. To make sure that the instrument is working correctly, I'll run three negative quality controls. Those just contain negative blood; so, it doesn't have any alcohol in it. As well as, an internal standard, which is just a compound that is structurally simular to alcohol. So, it will behave on the instrument similarly to alcohol.
So, we can be confident that if it's in those samples -- if we added it to the sample and it behaves on the instrument the way that we predict it should, then we can use that as a ratio to determine how much alcohol is present in the sample.
Q. And you mentioned standards, where do the

standards come from?

A. Our standards come from a third party that is -- that has to be deemed acceptable by our accrediting bodies.

Q. And how does your lab ensure -- there's quality controls ensured with the results?

A. We have to have negative -- so between every ten samples, they must be bracketed by two quality controls, which are -- must fall within that same narrow range. The instrument must be able to detect those within a narrow range.

We also -- our testing process requires that we receive two tubes. So, we will screen on one tube, which just means we're determining if there is ethanol present. And then on the second tube, we will confirm to determine how much ethanol is actually present.

And on that confirmation test, we are required to put a negative quality control, which I mentioned earlier, that does not contain any ethanol. And so, that is just to ensure that the instrument is not -- is able to correctly determine the amount of ethanol in the sample, as well as, ensure that there is no carryover from one sample to the next.

Q. And how do these quality-control samples

affect the validity of the samples that come before and after that?

A. So the quality controls -- if we know that they must fall within a strict range, and they fall within that strict range, then we can be confident that the instrument is correctly able to determine the amount of ethanol in those results, which ensures that the instrument can correctly determine the amount of ethanol in our case samples.

Q. And what happens if the quality-control checks that are in place, do not function the way they are designed?

A. So, if the quality controls fall outside of the range, we must -- we must go back to the last acceptable quality control and reinject from that point. So, start the run over from that point. And we only have one opportunity to restart the run. If it's outside of the range again, we have to repeat those samples on a different day.

Q. All right. And so, will a sample that it tested before or after be reported as final if the quality-control checks don't check properly?

A. No. We will have to repeat that sample once the problem is rectified.

Q. Okay. And in this particular instance, did

you follow the protocol for testing the blood using that machine?

A. Yes.

Q. And -- now, referring back to State's Exhibit No. 15, were these the vials of blood taken from the defendant -- sorry.

Were these vials of blood taken from the defendant, were these the ones that you analyzed?

A. Yes.

Q. And you mentioned earlier that there's two vials, did you test both vials?

A. Yes.

Q. And what is the purpose of doing that?

A. So we test -- we designate one, the A Tube; and the second tube will be the B Tube. And, I think, I might have mentioned this, but the A Tube is used to screen, just to detect if ethanol is present. And the B Tube is to confirm and really determine how much ethanol is present.

Q. All right. And -- now, let's say that you tested both vials, and you have results for both vials, how close does that first run have to be to the second run to qualify as a valid test?

A. So, the values of both tubes must be within 5 percent of one another for us to report the value.

Q. Okay. And why does it have to be within 5 percent?

A. That's according to our standard operating procedures.

Q. Now, in this particular case, did you have two runs that were within 5 percent of each other?

A. I, actually -- I had to run this -- I had to perform the tests on the samples three times. And our standard operating procedures do allow me to run a total of three times if need be. And because I ran a screen on Tube A, and then I performed the confirmation on the B Tube, those two values were not within 5 percent. So, our standard operating procedures require that I take the lower -- the tube associated with the lower result and perform a test, a third test on that. And so, I did do that. And that result was within 5 percent of one of the other results, so I was able to report my result.

Q. Okay. So -- correct me if I'm wrong. Just to summarize, so you followed the lab's protocol, correct, did you follow the lab's protocol?

A. Yes.

Q. And you ultimately reran Tube A, is that an accurate understanding?

A. I believe it was Tube A -- may I refer to

my notes just to double-check?

THE COURT: Yes.

THE WITNESS: Thank you.

A. Yes, that's correct.

Q. *(BY MS. WILLIAMS)* And after rerunning Tube A, was it then -- was that third run within 5 percent of the second run?

A. Yes.

Q. And does your lab -- luh-bor-ra-to-ry or lab-ruh-tory policy or protocol, allow you to report the result at that time?

A. Yes.

Q. And with that, what did those results -- what were you able to tell -- to determine from those results?

A. I was able to determine that the sample did have ethanol present.

Q. And what were you able to determine about the reliability of the test or the accuracy of your tests?

A. Because I was able to get two tests within our narrow range of 5 percent, that lets me know that the test is accurate, sensitive, and also reliable, and repeatable.

MS. WILLIAMS: Your Honor, may I

approach the witness?

THE COURT: Yes, ma'am.

MS. WILLIAMS: Thank you.

Q. *(BY MS. WILLIAMS)* I'm showing you what's previously been marked as State's Exhibit 20. And do you recognize it?

A. Yes.

Q. And how are you able to recognize it?

A. It has our Harris County Institute of Forensic Sciences' letterhead. The laboratory number is the same as this case. I, also, recognize my name as the analyst, as well as the technical and expert reviewers.

Q. Okay. And is this a true and correct copy of the lab results stemming from the analysis of a Mr. Daniel Bryant Imrecke?

A. Yes.

Q. And has it been altered in any way?

A. No.

Q. And is this -- was this made at or near the time of the analysis that we were discussing?

A. Yes.

Q. And was it made in the ordinary course of business for your lab?

A. Yes.

Q. And were you able to --

MS. WILLIAMS: Your Honor, at this time, I'd like to move to introduce what's been previously marked, as State's Exhibit 20 into evidence.

May the record reflect that I'm tendering to opposing counsel.

MR. FLOOD: I'm thinking -- I do have an objection. Is it okay if we approach?

THE COURT: Yes.

(Discussion at the Bench, on the record)

MR. FLOOD: Your Honor, I hate to do this again, but based on her testimony and the discovery that we got, that what she just said, the proper procedures were not applied correctly, on the occasion in question, for this result to be reported.

And I can show that through the documents I received in discovery. And I would move to suppress --

THE COURT: What is the problem?

MR. FLOOD: Okay. Well, it was tested three times. The first time it was tested, the quality controls were not in tolerance, and we have that documented. And according to her testimony,

then, they have to run it again. The second time is the one that's reported, and the quality controls were within the check. The sample was then tested a third time, and there's no 5-percent agreement, according to their procedures. And she reported the higher number, which is not in accordance with their procedures. She got the first one and the second one were within 5 percent, but it was based on faulty quality controls.

THE COURT: For the first one?

MR. FLOOD: For the first one. So, there's no two that are within the 5 percent, that are based on quality controls that are within tolerance, and she said she can't report it unless that happens.

MS. WILLIAMS: Your Honor, can I address that?

THE COURT: Yes.

MS. WILLIAMS: So from my understanding of her testimony, Tube A, and Tube B, Tube A was the first run; Tube B was the second run. As she stated, Tube B was done correctly. And so, because the issue was with Tube A, she reran Tube A a third time, as she's allowed to. Tube A and Tube B, the second and the third were then within that

5-percent range, and she is allowed to report the number at that point, based on what I listened to of her testimony.

MR. FLOOD: Right. But the documents show it went: B, A, A, and B was first, and it was out of tolerance on three of the controls. And so, it was run again. And so, the number that's being reported is what we have. But then, it was run again; and it came back at a .128 on the A. So, the A is being reported, but it was analyzed again; and the second time it was out of 5 percent. So, we don't have anything --

THE COURT: I'm going to send them for lunch --

MR. FLOOD: Okay.

THE COURT: -- the jury.

MR. FLOOD: I was hoping lunch would be here earlier, maybe.

THE COURT: I think they're going out.

MR. FLOOD: And I was going to just cross on this, Judge, but I can't forego an objection, based on a third prong of *Kelly*.

THE COURT: Prime, take them out.

I'm going to send y'all to lunch.

THE BAILIFF: Please rise.

(Jury leaves courtroom)

THE COURT: You may be seated. We're still on the record.

Mr. Flood, would you like to take the witness on voir dire with regard to State's 20?

MR. FLOOD: Yes, ma'am, I would.

VOIR DIRE EXAMINATION

BY MR. FLOOD:

Q. You provided discovery with respect to the three different analyses of this blood result?

A. Yes.

Q. IFS14-16245, that's the lab number we're dealing with, correct?

A. Yes.

Q. It was originally analyzed on December 17th of 2014?

A. Yes.

Q. And --

MR. FLOOD: May I approach the witness?

THE COURT: Yes.

Q. *(BY MR. FLOOD)* I'm going to show you what's been marked as Defense Exhibit 3. Is that a copy of the chromatogram of this blood analysis from December 17th, 2014?

A. Yes.
Q. Okay. And I'm showing you what's marked as Defense Exhibit No. 4, 5, 6, 7, 8, and 9, and if you could, look at those and tell me if you recognize those and if they pertain to the blood analyses with respect to this lab number in this case?
A. Well, these -- I believe, that one is from the 17th runs, correct --
Q. Correct.
A. -- and these are from the 22nd.
Q. Right. So, do you recognize that as a quality control from the second run on December 22nd?
A. Yes.
Q. Okay. For this sample?
A. No.
THE COURT: Which exhibit are you talking about?
MR. FLOOD: This is Defense Exhibit No. 4. Well, let me --
Q. *(BY MR. FLOOD)* It was in the batch with this sample, correct?
A. No, I --
Q. The second analysis of this blood analysis was on December 22nd, right?
A. So, the analysis of -- this is Tube A --

Q. Okay. This is Defense Exhibit 3.
A. Yes. And the standards -- this is associated with the data. This is raw data from the calibration curve before it was calibrated for Tube B on the 22nd.
Q. Right. But --
A. But this is not the complete information from the calibration run.
Q. I know. I'm just asking, though, the second analysis of this sample was run December 22nd, correct?
A. Yes, that's correct.
Q. And that's the one that's being reported, right?
A. That's not the final result. The final result that is on the report was associated with Tube A, which was run on the 24th, I believe.
Q. So, there's a fourth run?
A. No, that's the third run. These -- this calibration curve raw data is from the 22nd, but I also ran Tube A on the 24th.
Q. Okay. So, you analyzed it on the 17th -- what dates did you analyze this blood?
A. I ran Tube A on the 17th, Tube B on the 22nd, and then Tube A on the 24th.

Q. Of December?
A. Yes.
Q. And it was never analyzed again?
THE COURT: I'm sorry, I need to write that down, and I wasn't quick enough. Tube A on the 17th?
THE WITNESS: Tube A on the 17th, Tube B the 22nd, and then Tube A on the 24th.
THE COURT: Thank you.
Q. *(BY MR. FLOOD)* And then that's all, just three times?
A. Yes. For the alcohol testing, yes.
Q. It was never tested again for alcohol?
A. No, not to my knowledge.
Q. Okay. Let's see. So, do you have -- so, the 24th is the one that's being reported, correct?
A. Yes.
Q. Okay. And do you have -- do you have a copy of the analysis for the 22nd?
A. The actual result of the -- tube results?
Q. Right.
A. Yes.
Q. Okay. So, you recognize 4 through -- Defendant's 4 through 9, as they relate to the sample that was tested on the 22nd -- I'm sorry, I misspoke

on the dates?
A. Yes, I recognize this data.
Q. Okay. And the -- okay. So --
MR. FLOOD: Your Honor, I'd like to tender to opposing counsel 3 through 9 and ask that they be admitted for the purposes of this hearing.
THE COURT: Is there any objection?
MR. SAWTELLE: He handed us multiple documents; we're just going over them because we've never seen them before.
THE COURT: Okay.
MR. SAWTELLE: And we'd ask for, like, a minute.
MS. WILLIAMS: State has no objections, Your Honor.
THE COURT: All right. Defense 3 through 9 are admitted for purposes of this hearing.
Q. *(BY MR. FLOOD)* Okay. Do you have a copy of the result from the 22nd?
A. I have the original copy.
Q. Okay.
THE COURT: Which of your exhibits are you talking about?
MR. FLOOD: It's one that I still need to introduce. I'm sorry, I got confused with the

dates for a second.

Q. (BY MR. FLOOD) I'm marking this as Defense Exhibit 10. And is this the analysis from the 22nd?

A. Yes.

Q. Okay.

MR. FLOOD: And I tender this to opposing counsel, also, I'd ask that it be admitted for the purposes of this hearing.

MS. WILLIAMS: No objection, Your Honor.

THE COURT: Defense 10 is admitted for this hearing.

Q. (BY MR. FLOOD) So you stated that if the two tests -- you're only allowed to analyze the blood three times, right?

A. Yes.

THE COURT: Excuse me. Is that per vial, or is that overall?

THE WITNESS: Overall. After we -- if I was to perform it three times and they didn't match, after that, then, I would have to take it to a manager and they would make a decision.

THE COURT: Thank you. I just wanted clarification.

Q. (BY MR. FLOOD) Okay. So here's Defense

Exhibit No. 3. And this would be the analysis run on December 17th, right?

A. Yes.

Q. Okay. So, this represents the first analysis, right?

A. Yes.

Q. And then, you see the ethanol result here is .128, correct?

A. Yes.

Q. So -- then, I'm showing you what's marked as Defense Exhibit No. 10. And this is also the same lab number, right?

A. Yes.

Q. Analyzed on December 22nd, correct?

A. Yes.

Q. And we see an ethanol concentration -- or BAC, I'm sorry, of .139?

A. Yes.

Q. Do you have a calculator with you?

A. No.

Q. Okay. You don't argue with me that that's not within 5 percent, correct?

A. Yes, that's correct.

Q. So, that's outside of the required lab procedures, right?

A. It's outside of my ability to report either of those values.
Q. Okay. So, you can't report them if they're outside of the 5-percent lab policy, right?
A. Not at this point, no.
Q. And that goes to -- I mean, for accreditation, you've got to have certain policies that are required to be followed, right?
A. Yes.
Q. Okay. And so, this is December 22nd. And for that batch, there's more -- you're talking about the importance of the quality controls to be within the tolerance range, right?
A. Yes.
Q. And you admitted that there were some problems, that there were some quality controls that were outside of the tolerance range?
A. No, I did not admit to that.
Q. Okay. So, this is Defense Exhibit No. 4. And here we have December 22, right?
A. Yes.
Q. Same day that you analyzed the second analysis, which was a .139, right?
A. Yes.
Q. And you see this is the Vial 1 of 1. This

is a .025 standard, right?
A. Yes.
Q. And so, here's (indicating) the acceptable tolerance range, right?
A. Yes.
Q. .022 to .027, right?
A. Yes.
Q. And let's look and see -- we have .027, right? So, it's at the top, within the tolerance range, right?
A. Yes. I also -- can I explain something about that chromatogram?
Q. I was asking a yes-or-no question.
THE COURT: Can she please answer it for my purposes?
(Affirmative response)
THE COURT: Thank you. I appreciate it.
THE WITNESS: Can you put it back on the screen.
(Mr. Flood complies)
THE WITNESS: So, the way that our instrument works is, we will -- I'll run that calibration curve, which consists of the six standards that I referred to earlier. And what

happens is the instrument will just -- this is raw data. And so, basically, this value of .027 on this chromatogram is based on the last calibration. So, as you can imagine, different analysts are running our calibration -- it varies from analyst to analyst, but our acceptability, our 5-percent rule takes that into consideration.

So, on this run, this is the raw data. This is not the actual value associated with this standard on this curve. Because if you look at the top under -- next to "last calibrated," it has a date of Monday, December 22nd at 8:01. If you were to pull up the actual chromatogram of the sample that was run on that day, the date that it was last calibrated is the actual curve associated with that sample, if that makes sense.

Q. (BY MR. FLOOD) And that's what that refers to, because this says, it was acquired at 7:56 on December 22. And so, it's the same calibration from the day same, right, it's the same day that we're talking about?

A. This was run on this day --

Q. Okay.

A. -- but this is the raw data.

Q. Okay. Well -- so, the data says the

acceptable range of the 025. The 025 standard -- you put in standards to make sure that it's calibrated, and it's able to read what it's supposed to be reading within the acceptable ranges, correct?

A. Yes.

Q. Okay. And you said this is important, because if they're outside of the ranges, you wouldn't report it, correct?

A. If my curve -- if this was my final result -- if this was my raw result from my curve, technically, the .027 is within the range. But I do know that the raw data is not -- it doesn't always work like that. So, when it says "Date acquired: 12/22/2014," right here with the "7:56." Essentially, what happens is the instrument injected the .025 standard, and then it created a calibration at 8:01, which is when the chromatogram printed out.

Our calibration curve is -- the actual calibration is a result of all six calibrators. So, all six calibrators hadn't been injected yet, which is why this result is the raw data, and we don't use this for our reporting criteria.

In the discovery that I did provide to Mr. Flood, there is the actual data, with the actual result that is used for the curve and for the

samples.

THE COURT: Which represented all six injectors, I think you called them?

THE WITNESS: Yes. And it will have the proper calibration date on it, which will match the calibration date on the sample of the result that I did report.

THE COURT: "That you did report," you said? Or you said, "didn't"?

THE WITNESS: That I will use to determine the lower of the 5 percent.

THE COURT: Okay.

MR. FLOOD: May I continue?

THE COURT: Sure.

Q. (BY MR. FLOOD) Okay. So that was Defense No. 4. These are -- when you do the calibration, it produces a chromatogram like this, right? It will make a line, but a calibration is introducing a standard -- different standards, how many points are you using, five or six?

A. Six.

Q. Six points. Okay. And it produces a chromatogram for each one of those standards, you know, on a stairstep going up, right -- that's bad language. But you used different known standards to

calibrate the machine, right?

A. Yes.

Q. Okay. So, here's -- we have the .025. All -- it was just saying, this one shows it was a .027. And here's (indicating) what was entered as the acceptable range and it's within that acceptable range, right?

A. Yes. But this is the raw data that's not used for the calibration.

THE COURT: I think we're okay. I think we're okay.

Q. (BY MR. FLOOD) Okay. This is Defense Exhibit No. 5. Okay. Again, from the same batch of the samples that you reported, correct?

A. Yes.

Q. And this is the 05 quality control standard, right?

A. Yes.

Q. Okay. And the acceptable range is 047 to 052, right?

A. Yes.

Q. And the raw data shows it was 052, right?

A. Yes.

Q. So, at the very top. It's still within the range, right? So, when you get into the higher

calibrator, this is Defense Exhibit 6. Okay. And this would be .10 standard quality control from the 12/22 batch run, right?

A. Raw data, yes.

Q. Right. Well, I mean, this is what we asked for in discovery, and this is what the lab gave us, correct?

A. Yes.

Q. Okay. So, the acceptable range here is 095 to a 105, correct?

A. Yes.

Q. So, this is above the range of the number you reported, right -- I'm sorry -- this is below the range of the number that was reported?

A. For the value of the ethanol that I found in the tube, yes.

Q. Okay. So, this one we have a problem with because the raw data is a .108, which makes it outside of the range; is that correct, yes or no?

A. No, it's not a problem.

Q. No, I didn't ask you that. I said, is the .108 that was reported on the chromatogram in this raw data, is that inside or outside the acceptable range?

A. Outside.

Q. Okay. And this is Defense Exhibit No. 7. Okay. And so, now we have the .20 standard from the same batch on 12/22/2014, right?

A. Yes.

Q. And so, this is above the number that you had reported in this case, correct?

A. Yes.

Q. Okay. So, this is in the area of concern of this number, because the number you reported was between that 10 and between the 20, correct?

THE COURT: I got that. Go on. Come on.

A. What is the question?

THE COURT: I got it. Don't worry about it.

Q. *(BY MR. FLOOD)* So, the 0.190 to the .210 is the acceptable range, right?

A. Yes.

Q. And so, this one was a .216, this is outside of this range, correct?

A. Yes.

Q. And then this is Defense Exhibit No. 8, .30 standard quality control from this batch to Mr. Imrecke's sample, right?

A. Yes.

Q. And the acceptable range is .285 to .315, right?
A. Yes.
Q. And the ethanol was a .323 which was -- is that inside or outside of the range?
A. Outside.
Q. Okay. So you -- so, the first one you had was 12/17. The first sample was on 12/17, the second one was Monday 12/22, right?
A. Yes.
Q. And -- I'm sorry, those weren't within; the 5 percent?
A. No, they were not within 5 percent of one another.
Q. Okay. So, then, you ran it again to try to make it within 5 percent, correct?
A. I ran it again because that's our standard operating procedure.
Q. Right. Because you knew that there were issues, it wasn't complying with the lab's requirements, right?
A. It was outside of the 5 percent, yes.
Q. Okay. So, then, you ran it again on 12/24 --
A. Yes.

Q. -- is that right? Okay. And I have that. But -- what was that result?
A. It was 0.136.
Q. Okay. I'm sorry. The 12/22, the ones that we just went over are the ones that were outside of the range. And that was a .139, correct?
A. Yes.
Q. And the ones that were out of tolerance, so you ran it again. And the second time -- or the third time was on December 24th, and it was a 136?
A. Yes.
Q. Okay. So, that's the one that you reported, right?
A. Yes.
Q. Okay. So, from the December 17th results of a .128 the 12/24th of the 136 -- you have a calculator on you?
A. No.
Q. Is that within 5 percent?
A. No.
Q. It's not. Okay.
MR. FLOOD: Judge, I'm just going to write this down, just the three dates, if that's okay?
THE COURT: Okay. Quickly.

Q. (BY MR. FLOOD) So, 12/17 that was a .128, correct?
A. Yes.
Q. And there was nothing wrong with that one, right?
A. Nothing wrong with?
Q. You didn't have any quality controls that were out of tolerance, did you?
A. No.
Q. Okay. And then the 12/22, you had a .139, right?
A. Yes.
Q. Okay. But there was no 5-percent agreement, right?
A. Yes.
Q. Okay. So, then, on 12/24 you ran it again, and you got a .136, right?
A. Yes.
Q. So, this one was not only within 5 percent of this one, but this one also had three quality controls that were out of tolerance, correct?
A. No.
Q. Out of range?
A. No.
Q. Okay. Well, you're not denying what I just

showed you and what it says on the paperwork, right?
A. That's the raw data. That's not what's used to determine the results.
Q. Okay. And you didn't, in fact, report that one. So, you reported this one. And this one is not within 5 percent of this one either, correct?
A. Correct.
MR. FLOOD: Okay. I'll pass the witness.
MS. WILLIAMS: A few questions, Your Honor.
Can I turn his board so I can look at it?
THE COURT: Okay.
MS. WILLIAMS: Thank you, Your Honor. Do you mind if I use this?
MR. FLOOD: Don't mark on it.
MS. WILLIAMS: Oh, no, I won't write on it, no problem.
MR. FLOOD: I mean, you can use my paper, that's fine.
MS. WILLIAMS: Okay.
MR. FLOOD: May I mark this, just for preservation purposes?
THE COURT: Yes.

MR. FLOOD: Defense Exhibit 11, for demonstrative purposes.

THE COURT: Okay. It's admitted. I'm sure there's no objection, since she's using it.

Right?

MS. WILLIAMS: Yes, Your Honor, no objection.

THE COURT: Okay.

VOIR DIRE EXAMINATION

BY MS. WILLIAMS:

Q. Just so we can clarify the runs on 12/17, what tube was that?

A. Tube A.

Q. Tube A. And then the run on December 22nd, what tube was that?

A. Tube B.

Q. And the run on December 24th, what tube was that?

A. Tube A.

Q. Just to clarify, so when you ran Tube A the first time, and then ran Tube B the first time, what happened? Were you able to report those results?

A. No, I was -- because they're outside of the 5 percent, I did have to -- our standard operating procedure requires that I take the value, the lowest,

the tube associated with the lowest value and repeat that tube. So, I had to repeat Tube A.

Q. The tube associated with the lowest value. So, you repeated Tube A?

A. Yes.

Q. So, when you got a .139 and .136, were you by protocol and procedure allowed to report the .128?

A. No.

Q. And why was a that?

A. I couldn't report the .128, because our standard operating procedure requires that we have two values within 5 percent of one another. If the .128 and the .136 were within 5 percent of one another, then I would have reported the .128 value.

Q. Okay. And what about the fact that this .128 and this .136 was on the same tube, and you're comparing -- you want to compare Tube A and Tube B?

A. That's -- it just -- it doesn't necessarily matter. I would've -- even if I had -- Tube B had two lower values, it would still be okay with me to report Tube B, based on our standard operating procedure. Although, we are comparing A and B.

Q. Okay. And so, you followed your -- so, did you follow your procedure and your protocol?

A. Yes.

Q. And so --

MS. WILLIAMS: A few other questions, Your Honor. If I may publish the Defense Exhibits?

THE COURT: Yes.

Q. *(BY MS. WILLIAMS)* I want to take us through them each, one-by-one, but it seemed like you had something you wanted to explain. Is this raw data explanations to the various exhibits, are those relevant to the results that you reported?

A. No.

Q. And why are they not relevant?

A. Well, the raw data is just -- well, this is actually one of the results so that, in particular, is important. But the actual standards are -- basically, from day-to-day, we have to recalibrate the instrument, because it's based on my -- I mean, I calibrated the instrument based on my ability to pipette the correct amount into the tube.

And so, what I was trying to explain earlier, is that when it says "last calibrated," if you look at the -- it doesn't calibrate the instrument until the last standard runs, which is the .4 standard. And so, once that standard prints out, then the instrument is calibrated for the day. And then, it will reprint the correct values for the

.025, the .05, the .1, and everything; so, that data is not consistent with this raw data.

And I'm not -- I don't think I'm explaining it the best way; so, if you have questions, to maybe lead me in the correct direction.

Q. Okay. So, it sounds as if you're saying -- so you mentioned earlier, that all of the calibrators had not been properly injected at this point; is that correct?

A. They hadn't been injected yet.

Q. At the raw data standards?

A. Yes.

Q. So, at this point, it's not completely calibrated, is that a correct interpretation, or am I misconstruing it?

A. Yes. The calibration is complete; once all six standards have been injected because the calibration is based on all six standards.

Q. Okay.

MS. WILLIAMS: And just to clarify, Your Honor, I was referencing the defense exhibits regarding the standards. So, that would be Defense Exhibit No. 8, Defense Exhibit No. 7, Defense Exhibit No. 4, Defense Exhibit No. 6, Defense Exhibit No. 5.

Q. *(BY MS. WILLIAMS)* Okay. So, ultimately, I

just need you to explain in the simplest manner, why the number that you reported is accurate, and you're able to testify to that fact.

A. So the number that I reported is accurate, because I followed all the standard operating procedures. The instrument was working properly; I had no issues. The maintenance was performed, the calibration was acceptable, and all of the quality controls bracketing all my data fell within range. So, based on that information, I was able to provide a result that I believe is accurate and reliable.

THE COURT: Can I ask a question here?

MR. FLOOD: Yes.

MS. WILLIAMS: Yes, Your Honor.

THE COURT: Thank you.

So then I flat -- don't understand. Because we just saw three of your test runs -- I guess you could call them -- that weren't within the range of tolerance that is supposed be acceptable. And if I'm using incorrect words, forgive me. And, yet, you just said that they are within range. I don't understand.

THE WITNESS: I was saying that the quality controls are -- you're saying the actual values of the results of tubes for the case or are

you saying --

THE COURT: No. No, no, no, of the calibration runs.

THE WITNESS: Okay.

THE COURT: So, if you do these calibration runs -- is that okay to say that?

THE WITNESS: Yes.

THE COURT: -- and they come out wrong, outside the range of tolerance for that. How does that mean that it is running properly, then?

THE WITNESS: I guess, one of the ways that I think of it is -- so, I guess -- I'm trying to think of an example. It's almost like you can't trust the value of -- like, for example, the .025 standard printed off first, but that .025 standard, the value of that is not taking into consideration all of my other values because they haven't run yet. So, that's why I said that the calibration -- the values of the standard for the calibration curve aren't -- they're not printed. And -- I mean, they're printed, but that's the raw data. It's not the actual useable data until we include all of the standards --

THE COURT: Why?

THE WITNESS: -- to determine the

result.

Because that -- because the calibration is -- as the instrument is running, it's taking that value and recalibrating, essentially. So, it has six standards; it takes the first standard and injects it, and that's the only standard it's using to base that value onto it. But since we're using six, we have a wide range of acceptability we want. We want to be able to produce a reliable result from .025 all the way to .42. So, in order to do that, we can't just use one standard to generate a great result, right, you need all six calibrators to cover that wide range.

So, even after the first standard is injected, that's just one of six. It's only, you know, less than 20 percent of the calibration being injected out of the entire six that need to run.

THE COURT: Okay. But if three were outside of range, now you're talking about half of it.

THE WITNESS: But they're not outside of range, they're just -- I have a copy of the Discovery Order here. And I'm not sure if -- actually, if I printed -- I mean, maybe pulled that up and showed it you. The actual results and how the

time of the last calibration with that matches what is reported on the actual chromatogram as the result.

THE COURT: Let me ask you this question: What would you have to see in those calibration runs to say, Okay, we're not working properly?

THE WITNESS: After the last standard prints, then the actual -- it's no longer the raw data that will be printed out. The actual useable data will be printed out. So, then, if those standards are outside of the range because it's including all six standards to determine those values. Then, it would have to be within that narrow range of acceptability for each of the standards.

THE COURT: Do you have that printout with you?

THE WITNESS: I have it on a disk for the discovery, but I don't have the actual printout of it.

THE COURT: Do you happen to have that, do you know, for that day, the 22nd?

MR. FLOOD: I don't.

MS. WILLIAMS: Your Honor, while he looks, maybe, I could pull it up more quickly on the disk.

THE COURT: You want to try that?
THE WITNESS: Sure.
THE COURT: Thank you.
THE WITNESS: So, it's under the calibration curve and QC. You just have to, like, click through until you get to it.
MS. WILLIAMS: Just tell me when to stop.
THE WITNESS: This is for the 17th run, so the 24th -- or the 22nd should be after that.
THE COURT: Would it help if you went to the computer and looked?
THE WITNESS: Yes.
THE COURT: Okay. Would you?
MR. FLOOD: I may have what she's looking for. Are you looking for this?
THE WITNESS: No, the actual chromatograms associated with it.
MR. FLOOD: I showed you the chromatograms.
THE WITNESS: That's for the raw data.
THE COURT: Go to the computer, if you would please.
(Witness complies)
(Recess taken)

(Open court)
THE COURT: All right. So in the recess, y'all were able to find the correct page of the Discovery?
MS. WILLIAMS: Yes, Your Honor, we were.
THE COURT: All right. Have you shown it to Mr. Flood so he knows what you are looking at?
MS. WILLIAMS: Mr. Flood is looking at the Discovery right now.
THE COURT: Are you ready, Tyler?
MS. WILLIAMS: Your Honor, in his defense, I just gave him several.
MR. FLOOD: I think I'm ready.
THE COURT: Do you have printed out copies or just --
MS. WILLIAMS: I printed out one copy, yes, Your Honor.
THE COURT: All right.
MR. FLOOD: I am ready.
THE COURT: Okay. Is the State offering something at this time for the purposes of this hearing?
MS. WILLIAMS: Yes, Your Honor, State is.

Your Honor, may I approach the witness?

THE COURT: Yes.

MS. WILLIAMS: I apologize.

We have what's been previously marked as State's Exhibit No. 20, State's Exhibit No. 21, State's Exhibit No. 22, State's Exhibit No. 23, State's Exhibit No. 24, and lastly, State's Exhibit No. 25.

THE COURT: Any objection?

MR. FLOOD: I have to look at a couple of pages. But if I can just look at the rest, I don't think I will have any objections.

No objections.

THE COURT: All right. State's 21 through 25 are admitted for purposes of the hearing.

MS. WILLIAMS: Thanks, Your Honor.

May I publish?

THE COURT: Yes.

MS. WILLIAMS: I'm sorry, I put 20, but I'd like to correct that, 21 through 26.

THE COURT: Okay. So, it should be 21 through 26?

MS. WILLIAMS: Yes, Your Honor.

THE COURT: Thank you.

Q. *(BY MS. WILLIAMS)* Okay. Before the recess, you were explaining that there is actual correct data that is used. Is this a copy of that data? Is this correct data?

A. Yes.

Q. And State's Exhibit No. 22, is that also the correct data?

A. Yes.

THE COURT: When you say "correct data," you mean "final data" rather than raw?

THE WITNESS: Yes. So, this is the data that's based on all six calibration standards. So, this calibration occurred after my last standard was injected.

THE COURT: So, it just runs all six at the same time?

THE WITNESS: Each sample takes eight minutes to run. So, the raw data is -- it's injecting the first standard, and then it prints it out. It only takes into consideration what it has in the system already. So, then, when it injects the second standard, it takes into consideration, both, the first and the second, but there's still four more.

THE COURT: So, it's cumulative?

THE WITNESS: Yes. So, that's why the final -- so, this .025 value is based on the linearity of all six standards being considered.

THE COURT: So, it adjusts itself?

THE WITNESS: Yes.

THE COURT: Okay.

Q. (BY MS. WILLIAMS) And so --

THE COURT: I'm sorry. Let me make sure I am getting it.

So, in the first six runs, you're telling it what it should be reading, and it comes back and self-adjusts to those standards. So, if you were to repeat that, it would read all six correctly?

THE WITNESS: Can you say that one more time?

THE COURT: Are you following what I'm saying?

MR. FLOOD: I am, but that's not what -- I mean, by all means please ask.

THE COURT: No. If I'm wrong, I need to know.

The first time you put them all through you get certain results. And once it's finished, does the instrument figure out that it's reading incorrectly, because you've told it what it's

supposed to be reading, and then adjusts itself to calibrate to the proper readings --

THE WITNESS: No.

THE COURT: -- proper values? What's really happening then?

THE WITNESS: So it's just injecting. It's, basically, using -- it's collecting data as the instrument is running, and then once that sixth standard runs, and it has the data from that, it takes all six standards into consideration.

And then it -- based on those six standards, collectively, will determine, well, okay, that means the first standard is this; the second standard is this.

THE COURT: Let's keep going and see if I catch on after a while. Okay.

Q. (BY MS. WILLIAMS) Okay. So right here we see State's Exhibit No. 21, and this addresses, I guess, the .025 standard?

A. Yes.

Q. And so, as you said, this is the run through after all the samples -- the standards have been injected; is that correct?

A. Yes.

Q. And so -- correct me if I'm wrong, after

all, six of those samples have been inserted, now it's going back to check that .025 standard to see if it is within range now that everything has been contributed to the instrument?

A. Essentially, yes. It's not reinjecting it. It's just taking that information and saying, Okay. So this is really what the .025 standard is, based on all six standards that were injected.

Q. Okay. And so, all six standards have been injected, now, it's checking to make sure that that's really what the standard is?

A. After all six standards were injected, now it's saying this is what the result is of your .025 standard.

Q. Okay. And so now that all of the standards have been injected, the range has been listed as a .022 to .027, and the bottom here has it as a .024 is that within range?

A. No.

Q. And so now that we understand that all standards have been introduced into the instrument, if this reading would have been out of range, what would you have had to do per protocol?

A. Well, because this is run before I even run any case samples, I have a number of choices. I

could realiquot the curve and start over, or I could just wait until another day and try to redo the calibration curve again that day.

But this would not be acceptable. I could not -- I could not run cases or data with this if it was outside of the range.

Q. Okay. And it's this final report that you have to take into consideration?

A. Yes.

Q. All right. State's Exhibit No. 22, this is regarding the .05 standard; is that correct?

A. Yes.

Q. And the range states a .047 to a .052, and the ethanol states a .047, is that within range?

A. Yes.

Q. State's Exhibit No. 23, this is in regard to the .1 standard; is that correct?

A. Yes.

Q. And the range is a .095 to a .015; the ethanol stated is .098, is that within the acceptable range?

A. Yes.

Q. State's Exhibit No. 24, regarding standard .2. It states the range as a .190 to a .210, and it has the ethanol as a .197, is that within the

acceptable range?

A. Yes.

THE COURT: To save time, is it fair to say that the next few are also within the accepted range?

THE WITNESS: Yes.

THE COURT: All right.

Q. *(BY MS. WILLIAMS)* And so --

THE COURT: Move on.

MS. WILLIAMS: Okay.

Q. *(BY MS. WILLIAMS)* You mentioned earlier that you were building a curve?

A. Yes.

Q. Did this -- after the instrument had all six standards introduced, was this curve within range and allowed for you to move forward with the blood test?

A. Yes.

Q. And all of these actions that you took in making that determination, is that per the procedure and protocol of your lab?

A. Yes.

Q. And is it required to keep all three of your accreditations?

A. Yes.

Q. Lastly, it's become apparent that we're still determining the accuracy and reliability. Do you have in addition that you would like to tell the Court in regards to that issue?

A. I would. I guess, just solely based on the fact that my value was consistent with my values on my other runs on other days when there were no issues, leads me to believe that this value was also reliable.

In addition, if there were any issues, I'm not the only person that checks the run. We have numerous analysts that will, you know, come behind me and double-check things, as well as a technical reviewer, who will review the entire case as a whole. If they would have seen an issue with this curve, the run, or anything associated with the case, they would have sent it back to be repeated. Or they would have talked to me, possibly, the manager, if corrective action needed to be taken. After that, the manager is also the expert reviewer, who looks over the case again.

And so, because there are -- I'm not aware of any stops or issues or concerns throughout the entire time that this case was in the lab. And so, because of that, I do believe that the results

are accurate and reliable.

MS. WILLIAMS: State passes the witness, Your Honor.

THE COURT: Mr. Flood.

MR. FLOOD: Your Honor, first of all, I'd like to request that items in the Discovery Order that were not complied with be produced to us at this time. Specifically, Item No. 4. We had a Blood Discovery Order that was in place since December of 2014, and No. 4 is: "The laboratory's standard on general policies, protocol, and procedures concerning testing, quality control, quality assurance, calibration, achievement of the calibration curve, and administrative or technical review, if applicable, to all disciplines within the laboratory."

THE COURT: Hold on.

Do you have that with you?

THE WITNESS: Well, the Discovery Order is something that's handled by our quality department, and that is what's on the disk.

THE COURT: No, no, no. I'm just asking, do you happen to have those things with you, any of them?

THE WITNESS: I'm not sure if it's on

the disk. Our quality department also sent an email with additional materials, that I believe did include that.

THE COURT: Okay.

MS. WILLIAMS: Your Honor, we received that email; and so, we're about to print it. And so, Mr. Flood will get the information he subpoenaed for on Monday.

MR. FLOOD: Judge, we also issued a separate subpoena for this witness to bring these items to court that were not provided according to the agreed Discovery Order. I asked her, and she said --

THE COURT: Why didn't I know this Monday?

MR. FLOOD: We were hoping that they would come to court with the witness. And now there's this issue that comes up, so it makes it all the more important.

THE COURT: Tyler, I really appreciate your thoroughness, I do.

MR. FLOOD: We've been diligent, and we have an order.

THE COURT: I get that. But here's the problem: I feel like it's a surprise party that

I keep walking in on over and over. Surprise. Surprise.

MR. FLOOD: That's the way I feel with this witness and her testimony.

THE COURT: I get that. But if you had told me Monday that we were still waiting for this discovery that I ordered a while back; stuff you subpoenaed for Monday -- you announced ready without it.

MR. FLOOD: I did.

THE COURT: And so, I'm frustrated by that.

I'm frustrated by the appearance of a Motion to Suppress that was, apparently, well thought out and well prepared in the middle of testimony. I'm frustrated by all these things being sprung. Now great strategy, I guess. But I'm worn out by them.

So, I'm going to recess for lunch, and I'm going to be back here at 2:00 if I can get myself some food and get back here.

In the meantime, I'm going to let y'all have a free-for-all here in the courtroom and figure out if you have what you need. Try to get some food. And y'all just let me know. If you're not ready by 2:00, somebody email me to stay where I

am for a few more minute. And by 2:15, I may end up sending the jury home. Because at some point, we've got to report to them on what we have and what we need -- what we have and what they need to hear to finish this trial. So -- questions?

MR. FLOOD: You also said we would reconvene with the Dr. Guale hearing too. I would assume that would take place after this, and that's going to take even more time.

THE COURT: Do we need -- I'll be back. We'll see when we get back. Thank you.

(Luncheon recess)

(Open court)

THE COURT: Okay. We're back on the record.

During the recess, we have had an opportunity, as a group, to sit down and discuss our questions with Dr. Gu-ale -- is that how she says her name?

MS. WILLIAMS: Yes, Your Honor, Dr. Gu-ale.

THE COURT: As follow up, is there anything else the State has with Ms. Peterson?

MS. WILLIAMS: No, Your Honor.

THE COURT: Mr. Flood, on this issues,

of course.

VOIR DIRE EXAMINATION

BY MR. FLOOD:

Q. In your standard operating procedures, there's guidelines that state there's a 5-percent target value -- plus or minus 5-percent target in the quality control in the standards, correct?

A. The standards and the quality controls are two different things, so --

Q. The standards.

A. For the standards, it's 5 percent; but for our lowest standard, that's 10 percent.

Q. Okay. And that the first standards that we saw in the batch run on the 22nd, there were three that were outside of the 5 percent, the .10, the .20, and the .30, correct?

THE COURT: Does that apply to those?

THE WITNESS: The 5-percent rule does not apply to the raw data, but it does apply to the standards that would be used for the runs associated with the cases.

Q. *(BY MR. FLOOD)* And Mr. Imrecke's sample that he was tested, his chromatogram, would also be considered raw data?

A. No.

Q. What do you call that?

A. The difference between the raw data and the reportable data is, specifically, the date of the calibration that I mentioned previously. So, on the reportable data, if you look at the last calibrated, next to the last calibrated, I believe, it has the time that's associated with the last time that the final standard ran and calibrated the instrument, prior to the case samples being run.

Q. But you reported his without being manipulated, right?

THE COURT: Without what?

Q. *(BY MR. FLOOD)* Without it being changed, you reported that as printed, right?

A. I didn't manipulate any data.

Q. Well, there's raw data, and then there's different data, what do you call that?

A. The reportable data.

Q. And raw data is what the chromatograms are that comes out of the machine?

A. It comes out before the final calibration standard has been injected, yes.

Q. And then, the computer will change the raw data by a macro or something for it to be reportable?

A. This doesn't change that data. It just

calculates what the standards would be based on the last calibrator being included in the calibration.

Q. Okay. Can you have an area count that it corresponds to, like, a .027, and then the exact same area count that corresponds to an 024? The area count should be different if the response is different, right?

A. Depending on the internal standard, we don't directly look at the area count of the standard without looking at the ratio between that area count and the internal standard.

Q. Okay. So, if the internal standard area count is exactly the same -- if it's one number and the ethanol area count, then we have two numbers, and it corresponds to a .027.

And then, you have an 024, you shouldn't have the exact same internal standard area and the exact same ethanol area count, should we?

You can't have two different response numbers with the exact same area counts on both peaks, can you?

A. I'm not sure. Because I -- the area count -- I think there's other factors that determine that, so I can't for sure answer that with a definite yes or no.

Q. Well, you realize that in this case the two different calibration chromatograms that you showed us, there's different response numbers -- quantifications, right?

A. The values are different, yes.

Q. But all of the internal standard and ethanol area counts are exactly the same on both sets?

A. Okay.

Q. Are you aware of that?

A. No.

Q. So, how are those numbers changed?

A. The value of the .025 standard, for example, is based on the calibration. So it's like we mentioned earlier, the calibration isn't complete until after the last standard being used to make the calibration has been injected. So, once the last standard is injected, then the proper value for each of the standards can be determined.

Q. All right. That first calibration is where it has the vials that are outside of the range on the raw data. The machine -- the autosampler, actually, picks up a headspace vial and injects the sample into the machine -- into the instrument, and it reads it, right?

A. Yes.
Q. Okay. So, to say that it's using yesterday's data, or something like that, that's not accurate. The beginning of that batch and those sheets we showed you where there's three standards that were out of range, those are actual samples being picked up and injected into the gas chromatography, correct?
A. Yes.
Q. And they were reading out of tolerance, correct?
A. The raw data did show that it was outside, yes.
Q. Right. The raw data, the first data, the data that came out, the chromatography said that it was not in compliance of 4.4.4 of your Standard Operating Procedures of saying, it must be within 5 percent, correct?
A. That doesn't apply to the raw data.
Q. My question was: Was it within the 5 percent of the range that it says on the sheet, right?
A. So, you're saying the printout -- the printed value was not within the range that's on that printout, yes, that's correct.

Q. Okay. And there's nothing in your procedures that talks about raw data versus any other type of data, it just says standard curves are constructed using appropriate procedures and pipetting techniques and that the calculated concentration standards must be within these 5 percent. There no -- raw data doesn't ever appear in there or other data after that fact, doesn't it?
A. Nope.
MR. FLOOD: All right.
I mean, I don't have any questions, Judge. But I reurge my issue.
This witness, I don't think, in my opinion, sufficiently explained it to the Court, and can't explain why the plain language of their Standard Operating Procedures wasn't followed. And there's no need to talk about raw data versus other data. It's not in compliance.
THE COURT: All right. And that objection is overruled. And that's all we're dealing with right now with this witness.
I have an idea: Why don't we have the officer come in and testify, for purposes of the hearing, for a minute or two, and see how many of the factors y'all can pull out of him, before I can make

a decision as to Dr. Guale.

Okay. Would you return to the witness room, please.

(Motion to Suppress Continued)

THE COURT: All right. You're back. Come on up here this time.

THE WITNESS: Okay.

THE COURT: Do you have a calculator with you?

THE WITNESS: I have it on my phone.

THE COURT: Would you mind pulling that out?

(Dr. Guale complies)

THE COURT: Are you comfortable using Widmark's Formula?

THE WITNESS: Yes.

THE COURT: Would you calculate for us what the result would be with our factors with Widmark. You tell me what you want me to tell you first.

THE WITNESS: Okay. So for me to use the Widmark Formula and do back extrapolation, I have to assume elimination phase.

THE COURT: Why?

THE WITNESS: The person was

eliminating.

THE COURT: Okay. And so, you're telling me that if we're still in absorption, you can't do extrapolation?

THE WITNESS: Because there's going to be missing data. Because you need to have the number of drinks, you know, that that person had drunk in grams, and then you have to put that in there. That means it's interrogate calculation.

THE COURT: And then --

THE WITNESS: It's not going to be retrograde, it's going to be interrogate calculation.

THE COURT: And so, let's say you don't know which one it is, which of your formula would you use?

THE WITNESS: I would use the Widmark Formula for elimination only, assuming elimination.

THE COURT: Okay. If we can't assume elimination, what would we use, which of those six formulas?

THE WITNESS: All formulas are the same. It's just the volume of distribution -- the value that they put into the volume of distribution.

THE COURT: Okay.

THE WITNESS: Let me put the formula

for you, and I'll explain to you what that means.

THE COURT: No, I'm with you now.

THE WITNESS: Okay.

THE COURT: So, if we don't --

THE WITNESS: Can I explain this to you?

THE COURT: No, hold on. Hold on. I think we're fine. I think they're just different ways of calculating the same thing, right?

THE WITNESS: Yes.

THE COURT: With different things, like body mass, instead of just weight and height and things like that?

THE WITNESS: Yes.

THE COURT: Okay. So, if you don't know when the person last ate, you cannot say with certainty whether they were in the elimination phase, right?

THE WITNESS: You can. But you can estimate by giving the maximum allowed. Like, for instance, if you tell me the person has a full stomach, and I want you to calculate it with, you know, two-hour absorption from the time that he's stopped. Like, he stopped at 12:00 o'clock.

THE COURT: Okay. Let's say the last

food and drink was at midnight.

THE WITNESS: Okay.

THE COURT: And he got stopped at 1:41.

THE WITNESS: Okay.

THE COURT: And tested at 2:36.

THE WITNESS: Okay.

THE COURT: And we're going to give him the maximum time for absorption --

THE WITNESS: Okay.

THE COURT: -- which is two hours.

THE WITNESS: Okay.

THE COURT: If I give you those circumstances, then, you know he's in the absorption --

THE WITNESS: I can assume he was absorbing the whole time until the incident.

THE COURT: Right. And maybe even 19 more minutes.

THE WITNESS: Nineteen more minutes. And I can subtract .024, which is the total concentration of alcohol you can obtain from having a two-hour absorption.

THE COURT: Okay.

THE WITNESS: Subtract that from .13,

and I can tell you it's going to be .11, giving the benefit of the doubt.

THE COURT: Okay. So, .13 is what you had estimated earlier?

THE WITNESS: Earlier, at 2:36, it was .136.

THE COURT: But what would you estimate, then, at the time of 1:41?

THE WITNESS: At the time of 1:41 --

THE COURT: You're going to --

THE WITNESS: So it's only 55 minutes. It can be --

THE COURT: So, it's going to be 13.

THE WITNESS: Yeah, yeah.

MR. FLOOD: You're assuming elimination of 1.1?

THE COURT: No.

MR. FLOOD: That's what she's doing.

THE WITNESS: That's the maximum that you can go. Like, 12:00 o'clock he stopped, okay. So, he was absorbing for two hours.

THE COURT: Right.

THE WITNESS: Which is going to be 2:00 o'clock, right?

THE COURT: Right.

THE WITNESS: So, at that time he would gain 0.02 grams of alcohol.

THE COURT: Right.

THE WITNESS: But you have up to 2:36, which is --

THE COURT: The test.

THE WITNESS: -- the test, which is .136. In 30 minutes, he can eliminate, at that time. And then, in 30 minutes, if a person eliminates .15 in one hour, I can have 30-minute elimination, which will be .007. So, add that; it will be 311; 143 and minus 02, which is 123 -- 0.123.

THE COURT: Is there any set of circumstances where someone who's a .136 at 2:36, would not have been .08 at 1:41 if they stopped drinking at midnight?

THE WITNESS: There's no way they would be .08. It would be above.

THE COURT: Questions?

MR. FLOOD: That is totally not true.

THE COURT: Are you answering me when I ask if you have questions?

MR. FLOOD: I have questions.

THE COURT: There you go. Now, we're on the right track. Ask them.

RECROSS-EXAMINATION

BY MR. FLOOD:

Q. You testified several times that you cannot extrapolate and give a number if a person is in the absorption phase?

A. You can give a range. You cannot extrapolate.

Q. A range?

A. Yes.

Q. What are you assuming to come to that number?

A. What I'm assuming?

Q. Correct.

A. What I'm assuming is -- it will go through the whole formula calculation it has to take. You have to tell me the number of drinks, and how many grams were in there.

Q. Okay. Do you have that -- do you have the number of grams in the drinks?

A. No, nobody told me that. How many grams? I don't have that.

Q. What else do you need? Now, you're doing an extrapolation back into the absorption phase; is that right?

A. Yeah, using that fact. Which the fact is,

I just used it to add the maximum that's from the literature.

Q. You need to know --

A. It's 2 hours.

Q. -- you need to know when his drinking -- you need to know the drinking pattern up to the stop, right?

A. No. It's just only calculating after he stopped. Before that, it doesn't matter whether -- his drinking pattern, or what kind of drinking pattern.

Q. Of course, it does.

A. The reason is, I'm basing my calculation based on the fact I have. That fact I have is: at 2:36 a.m., he had 0.136 grams of alcohol.

Q. Okay.

A. That is a fact. I can go back using that.

Q. To 2:00 o'clock?

A. Yes, to 2:00 o'clock.

Q. But not to 1:41?

A. I can go with that assumption I just gave you.

Q. Assumption?

A. No. Based on a fact of two hours absorption, we just give the benefit of the doubt, he

stopped at 12:00 o'clock. That was a fact that I was given. If he stopped at 12:00 o'clock, I can come back from .136 to that point using both absorption and elimination. That's all I need. And this is a fact. I don't care about what happens before 12:00 o'clock.

Q. What if he drank eight beers and three shots before midnight and that was his last drink, he's going to be absorbing for two hours?

A. Okay. For that, humanly possible, he should be vomiting and not physically possible to do that. That's impossible.

Q. That's your opinion. The Judge asked you if there's any scenario. If a person takes a bolus dose of alcohol at one time before midnight and stops, there's a scenario where he can keep rising from the whole two hours, right, and go from a low BAC to a high BAC, right?

A. But you have a stop time at 6:00 o'clock that doesn't work.

Q. I'm not asking about that. The question the Judge asked you, is there any scenario? And she didn't say at 6:00 o'clock. So, is there any scenario, if a person drank a large amount of alcohol and ended at midnight, in a short amount of time,

there is a scenario where he can --

A. But that's unbelievable. I don't believe that scenario exists.

Q. So, it's your personal belief, not basing it on what science dictates?

A. Science tells me this is humanly impossible.

Q. To go from a .08 to a 136 in two hours?

A. No. For your theory to work, for one person to drink eight drinks and three shots at one time, it's physiologically impossible for your body to absorb that much alcohol. And we're talking about slow absorption and fast absorption, let's get real here. When you do scenarios, please, assume a scenario that's possible, humanly possible.

Q. And we are. That's what we're talking about possibilities, not what your personal belief is.

A person could be at a .07 at midnight and have drank a certain amount of alcohol, a large amount, okay, it happens sometimes, right?

A. I don't know. Do you have proof? Is there's an open container in there or anything?

Q. I'm asking you to be a scientist right now, and not what your personal beliefs are.

THE COURT: Hold on. Done. We're done. Give us a minute. Okay.

I'm granting the Defense objection to the extrapolation.

I want to thank you for your patience, especially, with me and trying to explain all of this to me. I could be wrong in my ruling, but I'm following some old case law that I've been familiar with for a long time. Thank you so much for your help today.

THE WITNESS: Thank you.

THE COURT: All right. Results come in; extrapolation does not.

Are y'all ready for the jury?

You can release the officer, probably -- unless there's anything else you needed him for.

MR. SAWTELLE: I think that would have been it.

THE COURT: That's all you needed in the record, right?

MR. FLOOD: Yes, ma'am.

THE COURT: Okay.

THE BAILIFF: Please rise for the jury.

(Jury enters the courtroom)

THE COURT: All right. You may be seated.

Let the record reflect that the jurors have rejoined us. We have been, obviously, working on this, all day, outside your presence. And now, I think, we are ready to continue with you. And, hopefully, finish the evidence with you today, as well.

All right. I don't believe this witness has testified in front of this jury yet, has she?

MS. WILLIAMS: Yes, Your Honor.

THE COURT: She did. So sorry, it's been hours. We did stop at that moment with No. 20 being offered.

MS. WILLIAMS: Yes, Your Honor.

THE COURT: I caught up.

All right. State's Exhibit No. 20 is admitted before the jury.

You may proceed.

MS. WILLIAMS: Thank you, Your Honor.

May I publish?

THE COURT: Yes.

REPORTER'S RECORD

TRIAL COURT CAUSE NO. 1996292

THE STATE OF TEXAS	*	IN THE COUNTY CRIMINAL
	*	
VS.	*	COURT AT LAW NUMBER 13
	*	
EDWIN GADDIS	*	OF HARRIS COUNTY, TEXAS

****

GUILT/INNOCENCE PHASE

(TESTIMONY OF DR. FESSESSEWORK GUALE)

****

On the 29th day of January, 2016, the following proceedings came on to be heard in the above-entitled and numbered cause before the Honorable Henry Oncken, Judge presiding, held in Houston, Harris County, Texas:

Proceedings reported by machine shorthand.

A P P E A R A N C E S

MS. ANDREA P. BEALL
Assistant District Attorney
SBOT No. 24086195
1201 Franklin
Houston, Texas 77002
(713) 274-0500
ATTORNEY FOR THE STATE OF TEXAS

MS. MARITZA SHARMA
Assistant District Attorney
SBOT No. 24075493
1201 Franklin
Houston, Texas 77002
(713) 274-0500
ATTORNEY FOR THE STATE OF TEXAS

MR. JAMES R. FLETCHER
Tyler Flood & Associates, Inc.
SBOT No. 24077619
1229 Heights Blvd
Houston, Texas 77008
(713) 224-5529
ATTORNEY FOR THE DEFENDANT

ALSO PRESENT:

Ms. Laura Flores, Paralegal
Tyler Flood & Associates, Inc.

January 29, 2016

(Jury present)

DR. FESSESSEWORK GUALE,

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MS. BEALL:

Q Would you state and spell your name for the record.

A My name is Fessessework Guale, F-E-S-S-E-S-S-E-W-O-R-K G-U-A-L-E.

Q And what do you do for a living?

A I'm hired by the Harris County Institute of Forensic Sciences. I work as an analytical operations manager in the toxicology laboratory.

Q What is your educational background that qualifies you to hold that position?

A I have a degree of the Doctor of Veterinary Medicine. I also have a Master's Degree in Toxicology. I am double board certified: One by the American Board of Veterinary Toxicology and another one by the American Board of Forensic Toxicology.

Q What type of -- well, how long have you worked with IFS?

A Nine years.

Q And during those nine years, what have your

duties been?

A Before I become a manager, I was a team leader in one of the sections. We have three sections in the lab; that is, gas chromatography section, liquid chromatography section, and screening and alcohol section. So I was organizer of all the section and as a lead in one section and I was also -- I get promoted to Toxicologist I -- Forensic Toxicologist I to be a manager to supervise the whole laboratory personnel and supervise the workflow of the lab.

And now I am the analytical operations manager in that whole -- I oversee the whole laboratory operations, the analytical operations from receiving the samples up to the end of the report; and I make sure all the cases that we receive, the samples we receive, take the proper rotation and follow the standard operation procedures. And then I -- when I believe it's the right result, I will sign them out.

Q Are you a member of any professional organizations?

A Yes.

Q What are those organizations?

A American Academy of Forensic Sciences, Southwestern Association of Toxicologists, California Association of Toxicologists, American Board of

Veterinary Toxicology.

Q What education and training have you had specifically in the area of -- the effect of drugs on the human body?

A When you do Master's in Toxicology, that's what you study. You would have an extensive study of drugs and other chemicals and other toxins and poisons and how they interact in the environment and how they interact once you introduce them in your body, what the body does to them and what happens -- you know, what is the effect of the drug and how they are expressed out, behaviorally, physiologically.

So those are extensive studies. And in the course of your studying, you know, to pass the board exam, you review a lot of literatures, research articles; and you update yourself with those every day. You read every day, and then you pass your board. And then after that, in the workforce, you go to conferences, present papers, you publish papers; so you are always continuously studying about the drug effects and what they do to you.

Q Have you yourself published papers?

A Yes.

Q And what papers are those?

A Just recently I had published analytical paper

using the state of the art instrument, which we call time-of-flight instrument; and I use that instrument to screen for the recently, you know, designer drugs that our young people are dying off. So we have that instrument and we are the first laboratory to do that and I published that. That was my recent publication. I have others.

Q Are you familiar through your education, experience, and training with the substances methamphetamine and amphetamine?

A Yes.

Q Can you educate us on methamphetamine and what it is?

A Methamphetamine is a very dangerous drug. It's a controlled substance, and you should never use it. It's a schedule II controlled substance; and the reason that nobody should use that is because it's addictive, it's dangerous, not only to yourself and also to the community, and the people that you are living with. And once you are hooked up, you become addicted to it. It's very hard to come off of it, so it's very dangerous.

What it does is it's a central nervous system stimulant. So in very low doses, you know, you get high, you get excited. That's the exhilaration

that, you know, the young people are -- and the adult people want to have in the beginning.

Then the more you use it, the more you start to get addicted; and then you start using more. Then you end up having a behavior that hurts yourself and other people, you know. You get into very abusive behaviors, get into hallucinations, violent behaviors; and you become a risk taker while you are driving.

So, you know, you feel like you are the only person in the world and nobody exists, so you can do whatever you want. You know, it gives you the courage and the energy to do whatever you want.

So it's really, really very dangerous and you can also die of it with overdose because it affects your central nervous system. It also affects your cardiovascular system; so you can die of a heart attack, you can die of excited delirium where, you know, you don't know where you are, you don't know what you do, you hallucinate, and you become out of your body.

It's a very dangerous drug. In a very small doses, it can be used -- there's a prescription that's a very, very small dose for narcolepsy where people are frequently sleeping; so they can take that medication, but that's a prescription drug. It's very

small dose, just for that purpose.

There's also a prescription for ADD, or attention-deficit disorder. People can take that with prescription. That's also a very small dose, which does not give you addiction behavior.

Q Let me ask you about those types of methamphetamine. There are -- there's a l-methamphetamine and a d-methamphetamine, correct?

A Yes.

Q What is l-methamphetamine?

A As in the chemistry of it, "l" and "d" stands for levorotatory or dextrorotatory. That means these are isomers. These are the same compounds but the chemistry formula is different. You know, the hydrogen is attached, the atom is attached this way or that way. This is the same molecule; but, functionally, because they are, you know, structurally different, the "l" one can be used without stimulating your brain.

Like, for instance, we have the Vicks inhaler that will have the l-methamphetamine in it that's been used for decongestant purposes. It doesn't go to your central because it's "l." But the dangerous one is a "d" one; that's the one that affects your central nervous system.

Q So is the d-methamphetamine the illegal

version of methamphetamine?

A Yes.

Q Now, you are aware that -- are you aware that your laboratory produced a lab in this case?

A Laboratory, yes.

Q A lab report?

A Yes.

Q And is that what we see here in State's Exhibit 14?

A Yes.

Q Is that your name in the bottom right-hand corner?

A Yes.

Q Now, why did you sign off on this lab report?

A I am the expert on this cases and I have to look at it; and I have to see whether, you know, the whole case is done properly and I have to sign it out. It's in our standard operation procedures, an expert has to look at the report and make sure the case is done properly; and then I sign it out.

Q Looking at this lab report, what is -- what are the levels of methamphetamine and amphetamine in the defendant's blood?

A The amphetamine is less than .10 milligram per liter. In other words, .10 means 100 nanograms; and

methamphetamine is also listed as .10 milligram per liter, which is less than 100 nanograms of the blood in the sample.

Q Is it possible that the methamphetamine on this lab report is the l-meth, or the legal meth?

A It is possible because we don't have a matter to differentiate between the two.

Q How do we know that this is not the l-meth?

A Usually, when the -- when there's -- when it's not the l-meth, you find both of them in there.

When it is the l-methamphetamine by itself, there is a chance that you may not see the amphetamine in there.

Q Why is amphetamine important?

A Because it's a metabolite. You have to see both. It's -- when you see both drugs in the same blood sample, that means it comes from the d-methamphetamine. In most cases.

And the reason is, when it is an l-methamphetamine, the ones that are being used in -- as a decongestant, you would not see this level in the blood. So most definitely when you see two of the parent and the metabolite, that means it comes from the "d."

Q Okay. So we know that this is -- am I

understanding you correctly in that this is the d-methamphetamine because the metabolite is there?

A Yes, unless this is something prescribed for narcolepsy or for ADD.

Q Okay.

A Unless those two are there, yes, this is definitely from the "d."

Q And in terms of ADD, which of these two substances is used to treat ADD?

A Actually, the ADD is only the amphetamine, the Adderall.

Q Okay. So would we see the methamphetamine if this were the product of ADD medication?

A No, you would not see the methamphetamine.

Q And would we see the amphetamine if this were the product of narcolepsy medication?

A Yes.

Q Okay. Would we see -- well, did you have a chance to review the video in this case?

A Yes.

Q And while reviewing the video, did you see any behavior of the defendant consistent with somebody with these levels of methamphetamine?

MR. FLETCHER: Object to leading, Your Honor.

THE COURT: Overruled.

THE WITNESS: Can I go ahead?

MS. BEALL: Yes.

A Yes, there are some symptoms that are associated with this level of the drug, which I see is complete fatigue of the person because these are low levels. It indicates that the person was at the crashing stage. That means where the drug is going out, so the body is yearning or wanting more; otherwise, it's going down. So we call it, you know, high when you have euphoric state as soon as you get the drug and the drug is affecting your brain, gets you excited; but as time progresses, it goes down, down, down and then you become really, really more fatigued because that drug that gives you the energy is not in you, so you get really fatigued.

So the level indicates to me that this is at the end of the drug and the symptom matches with this level.

Q (By Ms. Beall) And what symptoms did you specifically see in the defendant's behavior?

A He was a little bit agitated and he was also -- was not performing on the walk and turn properly. He was not holding his head properly. He was really fatigued. His talk, the way he talk is

another one. His actions and -- you know, repetitive. Doing something repetitive in your hand is another thing. That's, you know, out of consciousness. Subconsciously you are doing something that -- because your body is -- your body is missing something that it's used to.

Q And are you familiar with the term "tweaking"?

A Yes.

Q What does that term mean?

A Tweaking is the -- it's just a nervous effect where this is one of the symptoms of using this drugs, is tweaking; so, yes, there was a little -- not exaggerated, but there was a little tweaking there.

Q That you observed in the defendant?

A Yes, uh-huh.

Q Is there any such thing as just a little bit of meth to where it doesn't affect your mental and physical faculties?

A Well, it's my professional opinion if there is meth, it is affecting your mental and physical faculties, no matter what concentration it is.

Q Is there any such thing as a therapeutic amount of methamphetamine?

A Yes. The therapeutic amount is as long as it's under that prescription; and then there is a

therapeutic amount that you can obtain if you got that prescription to counteract a natural condition, like the narcolepsy or ADD. There is a therapeutic level, yes.

Q How do we know that this is not just a therapeutic level?

A It crosses in there. It crosses in the therapeutic level.

Q Okay. And what you observed in the defendant and what you know of the amount of methamphetamine and amphetamine present in this lab, do you believe that he was just using a therapeutic amount of methamphetamine?

A I -- because this is a low level of methamphetamine and because of what I saw, I -- I hardly believe this is a prescription. I cannot believe this is a prescription. If it is a prescription, he should not be behaving that way because that behavior is coming -- comes from repeated use of this drug. Usually the prescription should not last long time. So the behavior that I see does not come from a prescription.

Q So in your professional opinion, was this the street meth, the illegal meth that we know about?

A Yes.

MS. BEALL: Pass the witness.

THE COURT: Mr. Fletcher.

MR. FLETCHER: Thank you, Your Honor.

CROSS-EXAMINATION

BY MR. FLETCHER:

Q Dr. Guale, the standards have to be within an acceptable range in the raw data, correct?

A You mean -- what standards?

Q The standards have to be -- when you are doing a GC/MS, they have to be within the acceptable range in the raw data, correct?

A Yes.

Q Okay. And if they are not in the acceptable range, then that would be a problem, right?

A Yes.

Q Okay. You testified earlier that when -- some of the common signs of a person being intoxicated off methamphetamine, they would be -- you would expect to see violent behavior; is that correct?

A At the time, yes, depending on the stage where he was.

Q You testified that you would expect to see a person that's intoxicated on meth have a lot of energy, have high energy?

A Yes.

Q Okay. And you testified that you would expect

to see someone who is very excited?

A Yes.

Q And they might even be in delirium?

A Yes.

Q And you also testified that a person intoxicated on meth could have hallucinations?

A Yes.

Q Correct me if I'm wrong, but I heard you say that the "d" version of methamphetamine has been used to treat narcolepsy before?

A Yes.

Q Okay. And that's a prescription that a doctor can give to treat narcolepsy includes d-meth, right?

A Yes.

Q And you have no testimony today whether or not Mr. Gaddis has a prescription for any narcolepsy, right?

A No.

Q You don't know, right?

A I don't know.

Q Amphetamine, like we see on the lab result here, does not necessarily have to be a metabolite of methamphetamine, correct?

A There are others like the Adderall.

Q Right. You can see -- well, I'll put it this

way: Amphetamine is a common ingredient in many prescription medications, right?

A There are very few that we know.

Q Well, there are prescription medications that contain amphetamine; and they are pretty common, right?

A They are not common.

Q For ADD, it's pretty common, right?

A For ADD, yes.

Q So you don't know whether or not Mr. Gaddis has a diagnosis and prescription for ADD?

A No, I don't.

Q So it's entirely possible that the result of amphetamine that we see up there could have been a result of an ADD prescription and not necessarily a metabolite of methamphetamine, correct?

A But the fact that methamphetamine is there --

MR. FLETCHER: Object to nonresponsive, Your Honor.

THE COURT: Just listen to the question, and answer the question that he asks you.

Q (By Mr. Fletcher) It's possible, right?

A Amphetamine is, yes.

Q Now, isn't it possible, Dr. Guale, that a person could have a prescription drug containing methamphetamine and be using over-the-counter

A. I worked in Oklahoma at the Animal Disease Diagnostic Lab, toxicology section. I also worked for Denver Health Science Center, Denver, Colorado, in the toxicology lab as a manager. And the third one is where I am now.

Q. Dr. Guale, have you ever received any education or training on the effects of alcohol on the human body?

A. Yes, sir.

Q. Are you familiar with a phenomenon known as tolerance?

A. Yes.

Q. What is tolerance?

A. Tolerance is the way your body -- what tolerance to alcohol is, is it affects your central nervous system. So you will say you have tolerance, your brain function creates an adaptation to the disruption of functions, the brain functions that are caused by alcohol. So there are several different kind of tolerances. One is --

Q. I'm sorry. I have to break this up into question and answer. What are the different kinds of tolerances?

A. Okay. There's functional tolerance. That means certain functions of your body that's dictated by your brain would get compensated.

For instance, if you are asked to do a test and if you are asked to do driving, that takes hand and eye coordination. The tolerance you develop for that specific function may not be the same as the tolerance that you develop for the other function. That means there are different rates where your brain function tolerates different impairments.

Q. I'm sorry. How does one acquire a tolerance?

A. I am going to come to that.

Q. Excuse me. I'm sorry.

A. The way you develop tolerance is by doing certain things over and over again. In alcohol cases, these are chronic alcoholics, that people drink over and over again. So because of that repeated consumption of the alcohol, the brain has to compensate for those. So that's how you develop the tolerance.

Q. Okay. Just in practical terms, in simple person's terms for me, can someone have lost the normal use of their physical faculties due to alcohol and yet look -- appear to be normal on the outside?

A. Yes.

Q. And would that -- is tolerance exhibited --

MR. SHELLIST: Judge, I'm sorry. I apologize. I hurt my back. That's what I am doing this.

I am going to object to her testimony on two grounds. First, under 702 because I believe she's testifying as an expert in general -- generally -- general behaviors to my knowledge. If you will let me take her own voir dire, she will probably say she has never met my client and never talked to her. So she is testifying on general knowledge.

THE COURT: Let's do this outside the presence of jury. All right?

MR. SHELLIST: Sorry, Judge.

THE BAILIFF: All rise.

(Open court, Defendant present, no jury)

MR. SHELLIST: Your Honor, I have chronic back problems about two times a year and I am feeling it.

Forgetting for a moment and putting aside the qualifications of an expert, she said she has a masters in toxicology, I believe, in addition to the one for veterinary.

She's attempting to testify somehow that there's a phenomenon out there called tolerance to alcohol. What that is doing is suggesting to the jury somehow -- first of all, this is something that I think any layperson is capable of understanding on their own. Any layperson would understand, oh, you've got tolerance

or not. We have known that ever since we were 15 or 16.

I don't think even if she's an expert in that area, that that would be something that would assist the jury in understanding it, but because she's never met my client, has no idea about her history is, and is now throwing out things such as chronic alcoholism and alcoholic.

I would also then argue that would carry over to 403, and any prohibitive value it would have certainly outweighs -- potentially outweighs the prejudicial effect to my client.

THE COURT: Mr. Still?

MR. STILL: I believe I can -- I don't know what Dr. Guale is going to say, but I believe --

THE COURT: I hope you would. Would you like to do this outside the presence of the jury and see if we need to continue with this testimony?

MR. STILL: Yes, Judge.

VOIR DIRE EXAMINATION

BY MR. STILL:

Q. Dr. Guale, is it possible for someone to develop a tolerance to alcohol without them being a chronic alcoholic?

A. That would be really hard to say. That's the

given -- and the matter is you cannot develop tolerance for things that you don't take every time. So for me, it is impossible to develop tolerance if you are not doing it chronically.

MR. STILL: Okay.

THE COURT: Do you have any evidence that this Defendant was chronically an alcoholic?

THE WITNESS: No, I am just talking the science. That's all.

THE COURT: Objection is sustained.

Next question?

Are we ready to move forward with something else in front of the jury?

MR. STILL: I believe so, Judge.

THE COURT: Let's have the jury.

MR. SHELLIST: Can I have some sort of instruction to disregard the last statement about that issue?

MR. STILL: Judge, I would like to make mention of tolerance, not in the context of Dr. Guale's testimony, but in my closing. I would like to make mention of tolerance just as if it is an everyday phenomenon.

THE COURT: You can draw reasonable inferences from that, that's fine.

MR. STILL: Thank you, Judge.

THE BAILIFF: All rise.

(Open court, Defendant and jury present)

THE COURT: Thank you. Please be seated.

I sustained the objection of counsel and I am going to instruct the jury to disregard the singular comment made by this witness concerning the subject of tolerance. Okay.

Next question.

DIRECT EXAMINATION

CONT'D BY MR. STILL:

Q. Dr. Guale, taking into account the Judge's ruling, is it possible for someone to be intoxicated according to the law and yet not display those outward signs?

A. Yes, it is possible.

Q. I want to give you a hypothetical set of facts. Let me start with this: Are you familiar with the effects of alcohol on the human body?

A. Yes.

Q. I think I asked you that. I'm sorry. How much does an average person's blood alcohol concentration increase after one standard drink?

A. 0.02.

Q. Okay. And this is just an average person,

right?

A. Yes.

Q. So let me give you a hypothetical set of facts. Let's suppose that someone is driving at 2:10 in the morning and that they had their blood drawn at 3:31 in the morning.

Is it possible to consume enough alcohol such that the person was below a 0.08 at the time of driving and yet at 0.18 at the time their blood was drawn?

A. To have the blood alcohol level at a 0.18 within an hour and 20 minutes?

Q. Correct.

A. No.

Q. Can you explain why?

A. Because it takes about 30 minutes to absorb one standard drink, which is -- within 30 minutes if you are drinking one alcohol -- one standard drink, your blood level is going to be 0.02.

So for a person to get to a 0.18 level, at least they must have consumed about a minimum of 9 drinks, minimum.

Q. Okay. And so if that person did not consume any alcohol between 2:10 and 3:31, you are confident in saying that the science would tell us that there is no

way that they were below a 0.08?

A. It is humanly impossible.

MR. STILL: Pass the witness.

THE COURT: You may cross-examine.

CROSS-EXAMINATION

BY MR. SHELLIST:

Q. Ma'am, I mean no disrespect by this, but did I understand correctly that your primary focus prior to doing this job was in the field of studying animals?

A. That was 25 years ago.

Q. Veterinary toxicology?

A. Yeah. That was 25 years ago.

Q. Okay.

A. After 25 years, I was doing toxicology.

Q. Okay. Let's go with what you were just talking about at the end, this 9 drinks.

A. Yes.

Q. What does 9 drinks mean? What were you suggesting?

A. To have the person that -- to have 0.18 level of alcohol, grams per deciliter in a person's system or grams per hundred mL, yes {sic}.

Q. So for a human to have 0.18 in their blood, they would need to have what?

A. About 9 drinks. That's a minimum.

Q. Are you -- you are a scientist, correct?
A. Yes.
Q. And you agree with me that a lot of what you are testifying to involves so many assumptions; would you agree with that, "yes" or "no"?
A. I am not assuming. I am just basing my answer at 0.02 as a fact.
Q. But you are saying that a human would have to have 9 drinks to be 0.18. What human are you referring to? Are you referring to every single human or could it be different among the different humans?
A. An average.
Q. So you are making assumptions?
A. Yeah. Okay. Well, if you are talking about having different people and we call it an average person, and average -- and if you think that's an assumption, well, okay. That's what you call it, an assumption.
Q. So is it your testimony that you are giving this jury everything that you know based upon the average person?
A. When I say 0.02, yes, it is average.
Q. So tell me, what do you know about this young lady over here? Do you know anything about her?
A. I don't.

Q. Did you -- prior to testifying today, did you review the police report?

A. No.

Q. Did you review the video?

A. No.

Q. Now, you know about pharmacology, correct?

A. Correct.

Q. And you know about the effects of alcohol on the human body, correct?

A. Correct.

Q. And don't you think if you had studied the offense report, looked at the videotape, and talked to the officer and learned a little bit, maybe more about that evening, that would have helped you to give us more specific answers as opposed to answers about average people?

A. Could be true.

Q. So, let's just go with this hypothetical.

A. Okay.

Q. Someone is driving at 2:10, blood drawn at 3:30. Let's assume no drinks have been had in the middle. Okay?

So 2:10 driving, 3:30 the blood is drawn. And let's just assume that the officer was not feeding them alcohol in between. Okay?

A. Okay.

Q. You are saying at this point in time the average person would have to have what, nine drinks in their body?

A. At that point in time what I have for a fact is a 0.18 grams per deciliter of alcohol in that person's system. So I am just taking that as a reference point. And say to get to that level, a person -- an average person -- would have had to have -- consume a minimum of nine drinks.

Q. Over what period of time?

A. It could be four hours or five hours.

Q. Really?

A. Yeah.

Q. Okay. So are you telling me then if this is a curve for alcohol -- you would agree with me we have absorption, right?

A. Correct.

Q. And you have elimination, right?

A. Yes.

Q. And do you know anything about how her body absorbs alcohol?

A. I can make an assumption. Yeah, it is different, different people.

Q. Okay. Right. Some people absorb quickly and

some absorb slowly?

A. Correct.

Q. And that's also dependant upon -- you don't know what they had to eat?

A. Yes.

Q. Whether they are on, like, a low-carb diet, that could effect it, right?

A. Could be.

Q. Do you have any information of what she had to eat?

A. No.

Q. Would you agree with me that as a police officer investigating a DWI, it is extremely important to ask someone what did you eat and when you ate?

MR. STILL: Objection to argumentative.

THE COURT: Sustained.

Rephrase.

Q. (BY MR. SHELLIST) Do you agree that that's important?

A. For the purpose of determining whether they absorb it slowly or fast --

Q. Yes.

A. -- that would give more information.

Q. Right. Do you think it would be important for an officer -- do you think it would be important for an

officer to ask someone, "Hey, when was your first drink and when was your last drink?

A. It would have been good.

Q. Why is that important?

A. Because you can draw exactly what you draw for that specific person {sic}.

Q. Right.

A. If you knew when the first drink and the last drink was.

Q. Right.

A. So I -- if you can tell me that, I can draw that for you, but I don't have that information.

Q. Right. And it is also important to know what type of drink?

A. Correct. But right now the type of drink would be beneficial if you don't know what the name is, but really it doesn't matter what type of drink it is.

Q. So the 9 drinks. Okay. How many drinks would someone that is 105 pounds or 110 -- I don't know what it is. How many drinks would someone have to have in their body to be at a 0.18; can you answer that?

A. Yeah, I would have to make some calculations, but, again, I have to assume. The smaller the person, the less that it takes to get to that level. The bigger the person, the more it takes to get to that level.

Q. Understood. Understood. But 9 drinks, you would agree with me 9 standard drinks, that's a lot of alcohol, right?

A. 9 standard drinks, right, yes, it is a lot.

Q. It's a lot. And you know that alcohol affects lots of parts of the body, correct?

A. First, it just affects your brain and then your brain functions would dictate, you know, what kind of functions that you are going to show.

Q. So the first thing that it affects is your brain?

A. Yes.

Q. Okay. So would we expect then to see a decline in someone's ability to control the normal use of their mental faculties on the average person who is intoxicated?

A. Yes.

Q. That would be the first thing. And then followed by a loss of their physical faculties, correct?

A. Correct.

Q. And their physical faculties, for example, are slurred speech; is that one of the physical faculties that we often see in people that are intoxicated?

A. Yes.

Q. Is it one of the first things to go on a lot of

people?

A. It is different for different people. Different people do have different kind of outward behavioral impairments. So for some people, slurred speech. Some people may get slurred speech even at a 0.04, but some people --

Q. Some people don't?

A. -- may not -- may not get to slurred speech even when they have 0.18.

Q. Okay. And the reason this is important, would you agree, is because we are trying to keep people who have lost the normal use of their mental faculties and physical faculties from driving a car, right?

A. Yes.

Q. Because driving a car is a very different complex task?

A. Yes.

Q. It requires divided attention?

A. Yes.

Q. So it is very common to see in intoxicated drivers they have difficulty controlling their vehicles, correct?

A. Correct.

Q. Let me ask you this last question. Without making any assumptions, none, can you tell this jury

what she would have been at 2:10 a.m., without making a single assumption?

A. I don't know.

MR. SHELLIST: Pass the witness.

MR. STILL: I have nothing further from this witness.

THE COURT: May this witness be excused?

MR. SHELLIST: Yes, Your Honor.

MR. STILL: Yes, Judge.

THE COURT: Thank you, ma'am.

Mr. Still?

MR. STILL: State rests.

THE COURT: Mr. Shellist?

MR. SHELLIST: I have to make my motion, but after that I'll be ready to rest, Judge.

THE COURT: Let's excuse the jury.

THE BAILIFF: All rise.

(Open court, Defendant present, no jury)

MOTIONS HEARING

MR. SHELLIST: I don't know if I have to do this, Judge, but, I guess I would renew my earlier motions to see if the Court has changed its mind with respect to probable cause for the warrant or probable cause in general for the arrest.

THE COURT: No. Same rulings.

CAUSE NO. 2024734

STATE OF TEXAS	)	IN THE IMPACT COURT
vs.	)	
JOSE LUIS DELACRUZ	)	HARRIS COUNTY, TEXAS

MOTION TO SUPPRESS HEARING

July 19, 2016

On the 19th day of July, 2016, the following proceedings came on to be held in the above-titled and numbered cause before the Honorable Judge Linda Garcia, Judge Presiding, held in the County Criminal Court at Law No. 16 of Harris County, 1201 Franklin Street, Houston, Texas 77002.

Proceedings reported by computerized stenotype machine.

APPEARANCES

FOR THE STATE:

Ms. Sara Kimbrough
Harris County District Attorney
1201 Franklin Street
Suite 600
Houston, Texas 77002
Telephone: (713) 247-5800
Fax: (713) 755-1839
E-mail: sara_kimbrough@dao.hctx.net

FOR THE DEFENDANT:

Mr. James Fletcher
Tyler Flood & Associates, Inc.
1229 Heights Boulevard
Houston, Texas 77008
Telephone: (713) 224-4394
Fax: (713) 224-5533
E-mail: James@tylerflood.com

THE COURT: We're outside the presence of the jury. I understand based on -- Mr. Fletcher wants to make a motion to suppress?

MR. FLETCHER: Yes, your Honor.

At this moment, the Defense would move to suppress the blood in this case.

THE COURT: Okay. And do you have any witnesses on that motion?

MR. FLETCHER: We would call Dr. Fessessework Guale.

DR. FESSESSEWORK GUALE,

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. FLETCHER:

Q. Good morning.

A. Good morning.

Q. Can you please state your name and spell your first and last flame for the record.

A. Fessessework Guale, F-e-s-s-e-s-s-e-w-o-r-k; my last name is Guale, G-u-a-l-e.

Q. And how are you employed, Dr. Guale.

A. I am employed by the Harris County Institute of Forensic Sciences, in the toxicology section.

Q. And what is your job title in the toxicology section?

A. I am the toxicology analytical operations manager.
Q. So, it's part of your job responsibilities to oversee the testing of blood ethanol samples, right?
A. Correct.
Q. Okay. And your job is to make sure that the proper procedures were followed when a lab like yours is conducting blood ethanol testing, correct?
A. Correct.
Q. And you reviewed the -- the data in this case, correct?
A. Correct. I don't have the case file. It's with the analyst, because you're supposed to go to testify first.
Q. Sure. But you're responsible for supervising the data in this particular case, right?
A. Correct.
Q. Okay. And -- I just wanted to ask you a couple questions about -- you used a technique known as gas chromatography to analyze blood ethanol samples, right?
A. Yes.
Q. And basically, gas chromatography, or GC for short, is the science of separation, right?
A. Correct.
Q. What GC is, is you can analyze a sample for

officer to ask someone, "Hey, when was your first drink and when was your last drink?

A. It would have been good.

Q. Why is that important?

A. Because you can draw exactly what you draw for that specific person {sic}.

Q. Right.

A. If you knew when the first drink and the last drink was.

Q. Right.

A. So I -- if you can tell me that, I can draw that for you, but I don't have that information.

Q. Right. And it is also important to know what type of drink?

A. Correct. But right now the type of drink would be beneficial if you don't know what the name is, but really it doesn't matter what type of drink it is.

Q. So the 9 drinks. Okay. How many drinks would someone that is 105 pounds or 110 -- I don't know what it is. How many drinks would someone have to have in their body to be at a 0.18; can you answer that?

A. Yeah, I would have to make some calculations, but, again, I have to assume. The smaller the person, the less that it takes to get to that level. The bigger the person, the more it takes to get to that level.

Q. Understood. Understood. But 9 drinks, you would agree with me 9 standard drinks, that's a lot of alcohol, right?

A. 9 standard drinks, right, yes, it is a lot.

Q. It's a lot. And you know that alcohol affects lots of parts of the body, correct?

A. First, it just affects your brain and then your brain functions would dictate, you know, what kind of functions that you are going to show.

Q. So the first thing that it affects is your brain?

A. Yes.

Q. Okay. So would we expect then to see a decline in someone's ability to control the normal use of their mental faculties on the average person who is intoxicated?

A. Yes.

Q. That would be the first thing. And then followed by a loss of their physical faculties, correct?

A. Correct.

Q. And their physical faculties, for example, are slurred speech; is that one of the physical faculties that we often see in people that are intoxicated?

A. Yes.

Q. Is it one of the first things to go on a lot of

officer to ask someone, "Hey, when was your first drink and when was your last drink?

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A. It is different for different people. Different people do have different kind of outward behavioral impairments. So for some people, slurred speech. Some people may get slurred speech even at a 0.04, but some people --

Q. Some people don't?

A. -- may not -- may not get to slurred speech even when they have 0.18.

Q. Okay. And the reason this is important, would you agree, is because we are trying to keep people who have lost the normal use of their mental faculties and physical faculties from driving a car, right?

A. Yes.

Q. Because driving a car is a very different complex task?

A. Yes.

Q. It requires divided attention?

A. Yes.

Q. So it is very common to see in intoxicated drivers they have difficulty controlling their vehicles, correct?

A. Correct.

Q. Let me ask you this last question. Without making any assumptions, none, can you tell this jury

what she would have been at 2:10 a.m., without making a single assumption?

A. I don't know.

MR. SHELLIST: Pass the witness.

MR. STILL: I have nothing further from this witness.

THE COURT: May this witness be excused?

MR. SHELLIST: Yes, Your Honor.

MR. STILL: Yes, Judge.

THE COURT: Thank you, ma'am.

Mr. Still?

MR. STILL: State rests.

THE COURT: Mr. Shellist?

MR. SHELLIST: I have to make my motion, but after that I'll be ready to rest, Judge.

THE COURT: Let's excuse the jury.

THE BAILIFF: All rise.

(Open court, Defendant present, no jury)

MOTIONS HEARING

MR. SHELLIST: I don't know if I have to do this, Judge, but, I guess I would renew my earlier motions to see if the Court has changed its mind with respect to probable cause for the warrant or probable cause in general for the arrest.

THE COURT: No. Same rulings.

CAUSE NO. 2024734

STATE OF TEXAS	)	IN THE IMPACT COURT
vs.	)	
JOSE LUIS DELACRUZ	)	HARRIS COUNTY, TEXAS

MOTION TO SUPPRESS HEARING

July 19, 2016

On the 19th day of July, 2016, the following proceedings came on to be held in the above-titled and numbered cause before the Honorable Judge Linda Garcia, Judge Presiding, held in the County Criminal Court at Law No. 16 of Harris County, 1201 Franklin Street, Houston, Texas 77002.

Proceedings reported by computerized stenotype machine.

APPEARANCES

FOR THE STATE:

Ms. Sara Kimbrough
Harris County District Attorney
1201 Franklin Street
Suite 600
Houston, Texas 77002
Telephone: (713) 247-5800
Fax: (713) 755-1839
E-mail: sara_kimbrough@dao.hctx.net

FOR THE DEFENDANT:

Mr. James Fletcher
Tyler Flood & Associates, Inc.
1229 Heights Boulevard
Houston, Texas 77008
Telephone: (713) 224-4394
Fax: (713) 224-5533
E-mail: James@tylerflood.com

THE COURT: We're outside the presence of the jury. I understand based on -- Mr. Fletcher wants to make a motion to suppress?

MR. FLETCHER: Yes, your Honor.

At this moment, the Defense would move to suppress the blood in this case.

THE COURT: Okay. And do you have any witnesses on that motion?

MR. FLETCHER: We would call Dr. Fessessework Guale.

DR. FESSESSEWORK GUALE,

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. FLETCHER:

Q. Good morning.

A. Good morning.

Q. Can you please state your name and spell your first and last flame for the record.

A. Fessessework Guale, F-e-s-s-e-s-s-e-w-o-r-k; my last name is Guale, G-u-a-l-e.

Q. And how are you employed, Dr. Guale.

A. I am employed by the Harris County Institute of Forensic Sciences, in the toxicology section.

Q. And what is your job title in the toxicology section?

A. I am the toxicology analytical operations manager.
Q. So, it's part of your job responsibilities to oversee the testing of blood ethanol samples, right?
A. Correct.
Q. Okay. And your job is to make sure that the proper procedures were followed when a lab like yours is conducting blood ethanol testing, correct?
A. Correct.
Q. And you reviewed the -- the data in this case, correct?
A. Correct. I don't have the case file. It's with the analyst, because you're supposed to go to testify first.
Q. Sure. But you're responsible for supervising the data in this particular case, right?
A. Correct.
Q. Okay. And -- I just wanted to ask you a couple questions about -- you used a technique known as gas chromatography to analyze blood ethanol samples, right?
A. Yes.
Q. And basically, gas chromatography, or GC for short, is the science of separation, right?
A. Correct.
Q. What GC is, is you can analyze a sample for

officer to ask someone, "Hey, when was your first drink and when was your last drink?

A. It would have been good.

Q. Why is that important?

A. Because you can draw exactly what you draw for that specific person {sic}.

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MR. STILL: I have nothing further from this witness.

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MR. SHELLIST: Yes, Your Honor.

MR. STILL: Yes, Judge.

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Mr. Still?

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THE COURT: Mr. Shellist?

MR. SHELLIST: I have to make my motion, but after that I'll be ready to rest, Judge.

THE COURT: Let's excuse the jury.

THE BAILIFF: All rise.

(Open court, Defendant present, no jury)

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Fax: (713) 755-1839
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THE COURT: We're outside the presence of the jury. I understand based on -- Mr. Fletcher wants to make a motion to suppress?

MR. FLETCHER: Yes, your Honor.

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MR. FLETCHER: We would call Dr. Fessessework Guale.

DR. FESSESSEWORK GUALE,

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. FLETCHER:

Q. Good morning.

A. Good morning.

Q. Can you please state your name and spell your first and last flame for the record.

A. Fessessework Guale, F-e-s-s-e-s-s-e-w-o-r-k; my last name is Guale, G-u-a-l-e.

Q. And how are you employed, Dr. Guale.

A. I am employed by the Harris County Institute of Forensic Sciences, in the toxicology section.

Q. And what is your job title in the toxicology section?

A. I am the toxicology analytical operations manager.
Q. So, it's part of your job responsibilities to oversee the testing of blood ethanol samples, right?
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Q. Okay. And your job is to make sure that the proper procedures were followed when a lab like yours is conducting blood ethanol testing, correct?
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Q. And you reviewed the -- the data in this case, correct?
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Q. Sure. But you're responsible for supervising the data in this particular case, right?
A. Correct.
Q. Okay. And -- I just wanted to ask you a couple questions about -- you used a technique known as gas chromatography to analyze blood ethanol samples, right?
A. Yes.
Q. And basically, gas chromatography, or GC for short, is the science of separation, right?
A. Correct.
Q. What GC is, is you can analyze a sample for

volatile compounds and figure out what the concentrations of those compounds are in the blood, right?

A. Correct.

MS. KIMBROUGH: Your Honor, since his taking Dr. Guale as his witness, I just ask that he not lead her.

MR. FLETCHER: It's a motion to suppress.

THE COURT: It's overruled.

Q. (Mr. Fletcher) Basically what a GC does is you take a sample and it heats it up and runs it through a column which separates all the active volatiles and then they come out at the end and then you can tell what time they came out, right?

A. Correct.

Q. That's a real basic definition of what a GC does, right?

A. Correct.

Q. Okay. So, in your lab, you have what's known as standard operating procedures, right?

A. Correct.

Q. And those are written guidelines that dictate how blood ethanol samples are supposed to be run, right?

A. Correct.

Q. And people that work in your lab are guided by the SOP's, right?
A. Correct.
Q. And the SOP's dictate how the individual blood ethanol test is run in your lab, right?
A. Correct.
Q. And people are supposed to abide by the SOP's, right?
A. Correct.
Q. I mean, they're important enough to put into writing, right?
A. Correct.
Q. And the purpose of doing an SOP is to ensure that the science is accurate, right?
A. Correct.
Q. And another purpose is to assure that the science is reliable, right?
A. Correct.
Q. So, if you follow the guidelines sponsored by your lab, then you can come in here and say this is a valid sample, right?
A. Correct.
Q. Now, according to your SOP, when a person does a blood ethanol analysis, they have to do certain things before they can say that it's an accurate result, right?

A. They follow procedures.
Q. They follow the procedures --
A. Yes, sir.
Q. And those are things like sample preparation, right?
A. Yes.
Q. And making sure that the critical parameters of the machine are accurate, right?
A. Yes.
Q. And you have to do a whole bunch of checks and sequences before the machine is even ready to start doing a run, right?
A. Correct.
Q. And according to your SOP's one of those requirements is that the analysts run what's known as a calibration curve before each sequence, right?
A. Yes.
Q. Your own SOP's require that a calibration curve be conducted each time a blood analysis is done, right?
A. Right.
Q. And if a person were not to run a calibration curve, then that could be a big problem, right?
A. Without a calibration curve, you can't -- you can't come up with a number.
Q. Right.

A. So, it's important that you have a calibration curve.

Q. Because you have to -- basically, what the calibration curve is, for the Court's understanding, is you run a series of concentrations of ethanol through known standards in the machine and make sure that they come out at what you know them to be, right?

A. Correct.

Q. And there are a total of six points of calibration on the GC machine in your lab, right?

A. Correct.

Q. Okay. And you are required to -- the lab is supposed to print off each of the chromatograms for each point on the calibration curve, right?

A. Correct.

Q. And that way, you can tell whether or not what's being reported on the curve is accurate as to what came out on the chromatogram, right?

A. Correct.

Q. I'm going to show you what has been previously marked as Defendant's Exhibit 2.

Do you recognize what this is, Dr. Guale?

A. Yes. This is the calibration curve.

Q. That's the calibration curve for the sample in

this case, right?
A. Correct.
Q. And that was provided by your lab to me through the Court's discovery order, correct?
A. Yeah.
Q. Okay. And as far as you know, is anything -- is this a fair and accurate copy of the calibration curve that was done in this case?
A. If you can give me the data that's associated with it, because the dates maybe different.
Q. Sure. Okay. Let's do that.
Oh, and I forgot to ask: It's your standard operating guideline that you report the -- the concentration of ethanol to a third decimal place, right?
A. We changed it, yeah.
Q. Right. You report three, right?
A. Yeah.
Q. Because the machine will truncate it after three, so, you don't -- you don't round down after three, right?
A. No.
Q. But you do report three decimal places, right?
A. Yes. It used to be only two; but now, we are doing it three.

Q. Right. But according to your current SOP, you're reporting three.

A. Correct.

Q. All right. I'm going to show you what has been marked as Defendant's Exhibit 3.

Can you tell me, Dr. Guale, what this is?

A. This is a data that was generated from a .025 standard --

Q. Uh-huh.

A. -- which is actually right here.

Q. Okay. And that chromatogram that you have, Defendant's Exhibit 3, that's a chromatogram that's associated with the calibration curve, Defendant's Exhibit 2, right?

A. Correct.

Q. Okay. I'm going to show you what's been marked as Defendant's Exhibit 4.

Can you please tell the Court what Defendant's Exhibit 4 is?

A. It is a .050 standard, which is right here.

Q. Okay. And that chromatogram corresponds to the calibration that we're talking about, right?

A. Yes.

Q. Okay. I'm going to show you what's been marked

as Defendant's Exhibit 5. And this one's two sided.

Can you -- do you recognize what this is, Dr. Guale?

A. This is the .2 standard, which is right here.

Q. And that chromatogram is associated with the calibration curve on Defendant's Exhibit 2, correct?

A. Yes.

Q. Okay. And on the other side of Defendant's Exhibit 5, can you tell the Court what this is, please?

A. This is a .3 standard.

Q. Same question: That's associated with the calibration curve that we're talking about, right?

A. Yes.

Q. Okay. Last one. I'm showing you what's been marked as Defendant's Exhibit 6.

Can you please tell the Court what that is, Dr. Guale?

A. This is the .4 standard. And that's here.

Q. And that's also associated with the calibration curve, right?

A. Yes.

Q. Now, I want to ask you to -- for the Court's understanding, read off the calculated result for the .025 calibrator, please.

A. The .025?

Q. Right. What is the reported or the calculated grams per deciliter?
A. .025.
Q. Okay. And what is the calculated report on the chromatogram for that calibrator?
A. .024.
Q. Okay. Same thing with this Defendant's Exhibit 4: Can you tell the Judge what the reported or the calculated grams per deciliter is on the calibration?
A. .049.
Q. And what was the calculated value on the chromatogram associated with that?
A. .049.
Q. Okay. On Defendant's Exhibit 5, can you tell the Judge what the calculated grams per deciliter was on the calibration curve?
A. .198.
Q. Okay. And what is the calibrated value on the chromatogram?
A. .199.
THE COURT: I'm sorry, what's that number?
MR. FLETCHER: .199.
THE COURT: .199?

THE WITNESS: Yes.
THE COURT: And the first number was?
MR. FLETCHER: .198, Judge.
THE COURT: Thank you.
Q. (Mr. Fletcher) And can you tell Judge what the calculated grams per deciliter was for the .03 standard on the calibration curve?
A. The .3 is written .3.
Q. .3. And what does the chromatogram say for that?
A. .302.
Q. Okay. And last one, can you tell the Judge what the calculated grams per deciliter was on the calibration curve for the .4 standard?
A. .402.
Q. Okay. And can you read what the calculated concentration was for the chromatogram?
A. .401.
Q. Okay. Thank you.
Dr. Guale, would you agree with me that four -- excuse me, five out of these six chromatograms associated with this calibration curve report different value than what it reported on the curve, yes or no?
A. You must have another printout in there that you did not show me.

MR. FLETCHER: Nonresponsive, your Honor.

Q. (Mr. Fletcher) Would you agree with me that what we just went through, five of the six chromatograms do not match what was reported in the calibration curve?

A. Correct.

Q. Okay. And if you were to discover a problem with a calibration curve, you wouldn't report the result, right? You wouldn't sponsor the result, if you weren't sure that the calibration curve was done properly?

A. If those two numbers don't match, no.

Q. If they don't match, then you can't sponsor the result, right?

A. No. But I'm assuring you, there's another one included in there which matches.

Q. Do you have that with you?

A. No. You have it in your discovery.

MR. FLETCHER: I'll pass the witness, your Honor.

THE COURT: Ms. Kimbrough?

MS. KIMBROUGH: Brief re-direct, your Honor.

CROSS-EXAMINATION

MS. KIMBROUGH: Can I have those exhibits.

MR. FLETCHER: Sure.

Q. (Ms. Kimbrough) So, the differences in the numbers that we just talked about, do they indicate that the calibration on the instrument used in this case was done incorrectly?

A. Repeat your question again.

Q. Do the differences in those values that we just talked about indicate that the calibration that was done on this instrument used in this case was done incorrectly?

A. No.

Q. What does it indicate?

A. That indicates there was another calibration curve that was included in the discovery order that wasn't given to me, that means -- usually, when you come in in the morning, you had an instrument that ran yesterday.

So, when you are running your new standards and the calibrators, those numbers come out based on what the calibrator yesterday was.

So, what you do is once that's printed out, you ask the instrument to give you the calibration

based on those calibration points that you run today. So, you will have two printouts.

Q. Okay.

A. So, that's -- what I saw was we have had this before, in several cases where by rules --

MR. FLETCHER: Object to relevance.

THE COURT: Sustained.

Q. (Ms. Kimbrough) So, you're saying that there's another document that you've provided to defense counsel that shows that the calibration was done correctly, right?

A. Correct.

Q. And you asked and he refused to give it to you on the stand, right?

MR. FLETCHER: Objection, your Honor, that's not what happened.

THE COURT: Sustained.

Q. (Ms. Kimbrough) Did you ask to see that document?

A. I indicated that this is not -- there is another document in there that included all the points, the right points in the calibrator.

Q. Okay. And you stated earlier that you didn't bring a case file with you on this case?

A. No. It's with the analyst.

Q. Okay. And if the analyst were to arrive here in a couple of minutes with those documents, would you be able to find and refer to the document that you're speaking of that shows that the calibration of the instrument used in this case was done correctly?

A. In the -- we don't have those in the case folder, but they're in the discovery order. They're included in there.

Q. I'm handing you what's been previously marked as State's Exhibit 20.

Do you recognize this?

A. Yes.

Q. What is it?

A. It's a laboratory result on the laboratory analysis performed on Jose Luis Delacruz.

Q. And who is the expert reviewer listed on the bottom of that lab result?

A. It is Fessessework Guale. It would be me.

Q. Okay. And does your signature appear on it?

A. Yes.

Q. Can you tell me what your signature signifies on this document?

A. That means I am the expert reviewer. I looked at the whole case and I attested that the result is reliable. That's why I signed. My signature means this

is correct and reliable result.

Q. Okay. And in coming to that conclusion, would you have reviewed all the documents associated with the maintenance and calibration of this particular instrument?

A. That person would be Glenda Thomas. She is a technical reviewer. She reviews everything that's associated -- any data associated with this work, would be reviewed, the chain of custody and everything; and then she would put her signature here.

All the other data is correct. And the testing was performed and conducted according to the standard operating procedure.

Q. Okay. So, what do you look at to affix your signature on it?

A. I have to look at the data in the case folder.

The data in the case folder, there's a submission paper in there where; who submitted the samples, who signed it, and it was picked up by a person. I have to make sure this is the exact sample that was received, and I have to make sure -- I have to look at the chromatographic data and make sure that number that was on the chromatogram is actually here and that the units are correct.

Q. Okay.

A. And that's pretty much it.

I want to make sure that we have rules -- if the alcohol is for instance, less than .1, then I would have to send that for drug analysis. And all those are taken care of. This is greater than .1; so, it's good to go.

Q. So, based on your review of the records in this case, did you by signing that certify that the lab result in this case is reliable and performed subject to the protocol set out in your SOP's?

A. Yes.

Q. And based on the documents that have been placed in front of you by defense counsel today, does that alter your opinion regarding whether or not the lab results in this lab in this case are reliable?

A. No, it doesn't. I'm aware of what's included in this lab result.

MS. KIMBROUGH: Pass the witness.

THE COURT: Anything further, Mr. Fletcher?

MR. FLETCHER: Just briefly, your Honor.

REDIRECT EXAMINATION

BY MR. FLETCHER:

Q. Dr. Guale, earlier, you and I agreed that the chromatograms that I showed you were associated with the

calibration curve that I also showed you, right?

Those are the same chromatograms used to create that same calibration curve, yes or no?

A. No.

Q. They're not?

A. They're not.

Q. Even though you testified earlier that they were. You're changing it now?

A. No, I'm not changing it. I'm telling you that the one that you showed me, the curve says 6/22. I'm trying to associate those with that, but I'm aware of what's going on in the lab in the same day. So, you have two printouts. So, show me the other one.

MR. FLETCHER: Objection, your Honor, improper burden shifting.

THE COURT: Sustained.

Q. (Mr. Fletcher) Dr. Guale, I'm going to do this one more time.

This is the calibration curve you testified earlier associated with this case, correct?

A. I'm telling you --

Q. What is the date?

A. -- there is another one.

Q. What is the date on this calibration curve?

A. It's 6/22.

Q. Okay. And what is the date on this chromatogram?
A. 6/22.
Q. Okay. And what is the date on this chromatogram?
A. 6/22.
Q. And what is the date on this chromatogram?
A. 6/22.
Q. Same thing with the other side, what's date on that?
A. 6/22.
Q. And finally, that one. What's the date on that?
A. 6/22.
Q. Okay. So, it's fair to say that this calibration curve in these chromatograms were done on the same day, correct?
A. They're done on the same day, but there is another printout.
Q. You don't have that with you, do you?
A. No, I don't; but you have it.
Q. And you don't have any of the chromatograms associated with the report calculated concentrations on this curve, do you (indicating)?
A. I don't.

Q. I have that. I just showed them to you, right?
A. There is another one because I know what's included in the discovery order.
Q. You agreed with me earlier that these chromatograms are the ones that are associated with this calibration curve, isn't that correct?
A. Now I see they're not.
Q. Okay. But you testified earlier that they were.
A. Because I didn't know where you were going. I didn't know you were hiding some documents --
MR. FLETCHER: Objection, your Honor nonresponsive.
THE COURT: Sustained.
Actually, that's overruled. I think it is responsive. But it doesn't matter. It's to the Court.
Q. (Mr. Fletcher) And one last time, Dr. Guale, if you found out that there was a problem with the calibration curve on any given sequence, then you would not sponsor the result, isn't that correct?
A. Correct.
Q. Okay.
MR. FLETCHER: Pass the witness, your Honor.

RECROSS-EXAMINATION

BY MS. KIMBROUGH:

Q. And are you aware of a calibration problem with this instrument?

A. There is no calibration problem. It is a process.

Q. When you have --

A. And we have two printouts. And one is based on a calibration that was done yesterday and the other one is based on that calibration points. But they're going to printout, both of them, the same date.

Q. So, I've just received in my hand the case file from the analyst.

Would the documentation in this file assist you in further asserting your certification that the lab result in this case was reliable and subject to proper protocols?

A. It was done based on the standard operating procedure and as a result is reliable.

Q. Would there be anything in the analyst's case file that would further help you to confirm that?

A. You can give it to me. I can show you. (Reviewing).

Q. Is it possible that there are documents on this disc that are not in hard copy on the file?

A. Yeah. All that document is, every data that's associated with this run.
Q. Okay.
A. This case folder is only the result and is a submission.
Q. Okay.
A. So, the only thing is, you know, there is a date and the time that the sample was run and the date that, you know --
Q. So, there's no hard copy calibration records in this case?
A. No.
Q. Would there be on this disc?
A. Yes.
MS. KIMBROUGH: Your Honor, may we have a brief recess to pop this in so that she can tell me what document she's referring to so that we can provide that to the Court?
THE COURT: Sure.
(Recess taken)
THE COURT: We're back on the record.
BY MS. KIMBROUGH:
Q. While we were on recess, did you have the ability --
While we were on the break, you were

about to review the entire case file associated with this lab; is that correct?

A. Correct.

Q. And while we were reviewing that, did you come across any documents that you found would be helpful to your determination specifically whether the calibration of this instrument was done properly?

A. Correct.

Q. What documents generally did you come across?

A. I came across the document that I asked the defense counsel to give to me, and it's right there.

Q. Okay. And specifically, this is 13 pages of documents that were, amongst several other documents, provided to defense counsel at discovery; is that right?

A. Correct.

Q. By your office?

A. Correct.

Q. And so, I'm about to come up and hand you State's Exhibit 23 through 38; and I'm just going to ask you -- can you tell me what State's Exhibit 23 through 38 are?

A. This is a calibration curve, which have the same June 11 date, and all the associated chromatograms generated using that curve.

Q. And the documents represented in State's 23

through 38, do they represent a complete rendering of the calibration protocols that were followed regarding the instrument that was used to test this blood in the case?

A. Correct.

Q. And if you've had time to review those while you're on the witness stand, can you state -- does the information in that document support your earlier conclusion that the blood results in this case were reliable and were reached after following the protocol set out in your standard operating procedure?

A. Correct.

Q. Okay. Is there a specific document in there that you would point to for that conclusion? If not, that's okay, but if there is one.

Is there a specific document that you were referring to that you didn't get on direct examination with defense counsel?

A. Yeah, these chromatograms.

Q. Okay. Which one specifically, in terms of exhibit number?

A. I have to see what he showed me before, because there are several of them.

Q. So, I'm also handing you Defense 2, 3, 4, 5, and 6.

A. Okay.
Q. Just kind of keep these with you.
So, is Defense 2 the same as State's 23?
A. This one goes with this.
Q. Oh, you've got to refer to them by exhibit number.
A. Okay. Twenty-three.
Q. State's 23.
A. And this one, which is 24 matches what's on the 23.
Q. So, just so we're clear, these are Defense Exhibits. 2, 3, 4, 5 and 6 with the blue sticker are Defense Exhibit. The ones with the white stickers are State's Exhibits.
So, you said State's Exhibit 23 is a duplicate of what in the Defense Exhibit?
A. Okay. I need to get -- this initial is KP.
Q. Okay. What's that initial?
A. That's the analyst's initial, which she's not here. And this one, under Salazar, 11/26. (Reviewing).
Okay.
Q. I guess what I'm trying to ask is: How do we ensure the Judge that we followed the standard operating procedures regarding this lab?
A. How do we ensure?

Q. Uh-uh.
A. All the documents are really here.
Q. And can you personally testify that the standard operating procedures were followed in this case?
A. Yes.
Q. And that's your testimony under oath?
A. Yes.
Q. Under the penalty of perjury?
A. Yes.
Q. Okay. And are you as the -- tell me what your full title is again.
A. Analytical operations manager.
Q. Okay. And -- what qualifications do you have to go through to hold that title?
A. Oh, I have almost 25 years of experience working in the lab, in toxicology lab, and I do have a managerial and supervisory experience, plus I do have a specialized training. I hold a master's degree in toxicology.

So, when you do specialized --

MR. FLETCHER: Your Honor, we'll stipulate for this hearing that the witness is an expert.

THE COURT: Okay.

MS. KIMBROUGH: I was just trying to get through that the witness is qualified to make that determination that the standard operating procedures were followed in this case.

Is that what you're stipulating to?

MR. FLETCHER: Just that you don't have to build up her qualifications or anything.

MS. KIMBROUGH: Okay.

MR. FLETCHER: I stipulate for the purposes of this hearing that the witness is an expert.

MS. KIMBROUGH: Let me be clear so that I know I do not have to go further: You're stipulating that she's qualified to testify regarding the fact that the standard operating procedures were followed in this case?

THE COURT: Yes. Ms. Kimbrough, we've already agreed that she's an expert.

MS. KIMBROUGH: Sure.

Pass the witness, Judge.

FURTHER REDIRECT EXAMINATION

BY MR. FLETCHER:

Q. Dr. Guale, I'm going to ask you the same sort of exercise that we did before.

Can you tell me, please, on the calibration curve dated for June 11th, can you read to

the Court what the calculated result was for the .05 calibrator?

THE COURT: But we've been through this before, Mr. Fletcher.

MR. FLETCHER: This is a different chromatogram.

THE COURT: It's a different chromatogram?

MR. FLETCHER: It's a different calibration curve.

THE COURT: For the 05?

MR. FLETCHER: For the 05.

Q. (Mr. Fletcher) Can you read out the calculated grams per deciliter for .05 calibrator?

A. .048.

Q. Okay. And can you read for the Court, the calculated amount on the chromatogram associated with that same calculator?

A. .047.

Q. And can you read for the Court, the reported value on the calibration curve for the .10 calibrator?

A. .1.

Q. And can you read for the Court, the corresponding chromatogram value?

A. .099.

Q. All right. And can you read for the Court, the calculated result on the calibration curve for the .03 standard?
A. .298.
Q. And again, can you tell the Court what the calculated value on the chromatogram was?
A. .297.
Q. Okay. And last one, can you tell the Court what the reported value on the calibration curve was for the .04?
A. .402.
Q. And same thing, can you read the calculated value on the chromatogram?
A. .401.
Q. Okay. So, would you agree with me, Dr. Guale, that on four of the calibrations used for this calibration curve, the reported values are different than those that came out on the chromatogram, yes or no?
A. Correct.
MR. FLETCHER: Pass the witness, Judge.
THE COURT: Anything further, Ms. Kimbrough?
MS. KIMBROUGH: Nothing further, Judge.
THE COURT: I have a question, Doctor. Dr. Guale, how closely do the

calculations have to match before you can rely on the results -- the testimony that Mr. Fletcher has elicited, is that enough of a difference to make a difference in the outcome of the sample?

A. No.

Sometimes, the numbers would get truncated and they show up in there.

THE COURT: Okay. Thank you.

Anything further for this witness from either side?

MR. FLETCHER: Just one question.

THE COURT: Okay.

FURTHER REDIRECT EXAMINATION

BY MR. FLETCHER:

Q. Dr. Guale, would you agree with me that the results that are reported on the chromatograms for both calibration curves, there are at least ten different values than what are reported in the chromatograms?

A. They are not ten different values.

Q. Okay. There were six, excuse me, five on the first one and four on the second one, correct?

A. Correct.

Q. Okay. So, we have nine reported values on the calibration curve that are different from what the chromatogram say, right?

A. Correct. And these are two different runs.
Q. Right. One is the initial and one is the confirmatory one.
A. One is the initial and the other one is the confirmatory one.
Q. But your SOP's call for running a calibration curve on either one, correct, before you start, right?
A. Yeah.
Q. Okay. And you don't have any chromatograms with you that show the reported values on the calibration curve for either one, right?
A. You mean with me?
Q. Yeah.
A. For the case or for the --
Q. For the calibration curve, you do not have with you chromatograms reflecting the report -- the values issued on the report, right?
A. Yeah. These are right here. Right now, we have them.
Q. But we just went through that there's nine different ones that you don't have chromatograms for?
A. They're not different.
Q. They're different than what was reported.
A. Just that the -- that's in the same chromatogram. You have it here. They're the numbers.

The third digit is -- the third decimal digit is different.

Q. Right. And it's your lab's SOP to report to three digits, right?

A. Correct.

Q. Okay.

MR. FLETCHER: Pass the witness, your Honor.

MS. KIMBROUGH: Nothing further, Judge.

THE COURT: Okay. You can step down, Dr. Guale.

I'm going to deny the Defendant's motion to the suppress on the basis that I believe that the problems brought up in the motions go to the weight, not the admissibility of the evidence.

Bring the jury back.

THE COURT: Does anybody have anything we need to take up with the Court before we bring the jury back in.

MR. FLETCHER: Just that -- I forgot to mention this earlier -- during my motion to suppress for the blood, I intended to make the argument that the State haven't met their burden under *Kelly v. State*, specifically the third prong, based on the witnesses testimony; and I forgot to make that argument after you had made your rulings. I just wanted to get that on the record that that's what I intended to argue.

THE COURT: I'm glad you brought that up. Let's address that.

Because we had had the jury for quite a bit of time at the time, I didn't really give chances to argue that.

So, if you would like to say a few words about that motion at this time -- so, you're saying that they didn't meet their burden under Kelly?

MR. FLETCHER: Right.

The argument is, Judge, that the State is required to show by a clear and convincing evidence to the Court as the gate keeper under Kelly v. State for the proponent of any scientific evidence, and the State bears the burden of introducing the contested evidence;

specifically, the blood in this case.

And the argument would be from the Defense is that the State's expert witness testified that the -- that it's very important to do a calibration curve before you do any sort of blood analysis and you have to follow the standard operating procedures.

And if you don't, if you don't have a proper calibration, then the result can't be sponsored because we don't know if the machine was accurate or not. And in this specific case -- and I don't know how this happened, I'm not guessing one way or the other, but the fact is that the calibration curve, in my opinion, has some major issues with its -- specifically that the levels reported on the curve itself do not coincide with what was actually produced in the data, in the chromatograms.

And we would argue that the State can't meet their burden under the third prong of Kelly because the calibration curve is inaccurate. What's reported was not what was actually conducted. And therefore, if the calibration curve is inaccurate, then the result itself is inaccurate; and therefore, the State can't meet their burden under Kelly.

THE COURT: Thank you.

Do you have any response?

MS. KIMBROUGH: Just to point out that Dr. Guale testified actually in response to a question by the Court that the variation between those numbers did not mean that the calibration was done incorrectly.

They were, at the most, you know, two thousands of a point different and she testified that she stood behind the reliability and accuracy of the lab. She's a duly qualified expert, as was stipulated to by counsel, and she also testified regarding the reliability of the lab itself as well as the underlying methodology under 702.

THE COURT: Okay.

So, your objections and your arguments now are noted for the record; and the motion is denied.

(Proceedings Concluded)

STATE OF TEXAS

COUNTY OF HARRIS

REPORTER'S CERTIFICATE

MOTION TO SUPPRESS HEARING

July 19, 2016

I, Mubarak Oladejo, Official Court Reporter in and for the County Criminal Court at Law No. 16 of Harris County, State of Texas, do hereby certify that the above and foregoing contains a true and correct transcription of all portions of evidence and other proceedings requested in writing by counsel for the parties to be included in this volume of the Reporter's Record in the above-styled and numbered cause, all of which occurred in open court or in chambers and were reported by me.

I further certify that the total cost for the preparation of this Reporter's Record is $_____ and was paid/will be paid by _____.

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THE COURT: May this witness be excused? Any objections from the State?

MR. BATY: No objection from the State, Your Honor.

THE COURT: How about from the defense?

MR. FLOOD: No, ma'am.

THE COURT: Okay, ma'am. You are excused. Thank you for coming down.

State, call your next witness.

MR. BATY: State calls Dr. Fessessework Guale to the stand.

THE BAILIFF: Your Honor, the doctor has not been sworn in yet.

THE COURT: Come up, ma'am. Good afternoon.

THE WITNESS: Good afternoon.

(Oath administered)

THE COURT: Thank you, ma'am. Come on up and have a seat. Keep your voice up.

You may proceed, sir.

MR. BATY: Thank you, Your Honor.

FASSESSEWORK GUALE, DVM

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. BATY:

Q. Good afternoon now, Dr. Guale. Could you state your name for the record?

A. Fessessework Guale, F-e-s-s-e-s-s-e-w-o-r-k G-u-a-l-e.

Q. Dr. Guale, how are you presently employed?

A. I'm employed by the Harris County Institute of Forensic Sciences as a toxicologist analyst, communications manager.

Q. How long have you been with the Harris County Institute of Forensic Sciences?

A. Ten years.

Q. How long have you been in your present role?

A. As a manager, probably since 2008, which is eight years.

Q. I want to talk specifically about some of the training and education that you've received. Let's start with your education. Do you have an undergraduate degree?

A. Yes.

Q. What is it in?

A. It's the Doctor of Veterinary Medical Degree

that is -- I was a veterinarian, simply, and the other one is a post-graduate which is a Master's Degree in toxicology. I obtained that from Oklahoma State University.

Q. And do you have any specific training in -- outside of your degrees in forensic toxicology?

A. Yes. Well, the training starts when you are doing your Master's Degree where you go and study in depth about drugs and alcohols and other chemicals and toxic chemicals and poisons and the toxic effects on the body and how the body responds and what happens to the drug and all of the processes that goes on under -- at a similar level. So, that's where you start your training.

And then during workforce, you know, when you are working in the laboratory, then you will be trained in the lab. And also we do have conferences and trainings that we go and get specialized training in regards to the subject we are dealing with.

Q. So, in addition to your training, have you had any occasion to conduct analysis on blood specimens?

A. Yes.

Q. If you could ball park it for us -- and I realize this number might be pretty high -- but how many times, would you say?

A. Oh, I have been working in the lab since 1992, which is 24 years; and out of that eight years would be as -- on a bench, at a bench level and performing all, you know, extractions and maintaining instruments and reporting the data; and then after that, I go into more depth which is a technical review of the data and expert review of the data. So, at a given time, I may be involved -- at that time when I was doing, you know, bench -- at the bench level, I probably was doing about a hundred samples a month for different things. You know, it could be alcohol; it could be other things, other drugs, stuff like that.

Q. A hundred samples a month?

A. Yeah.

Q. Twelve months a year, 1200 samples a year, 8 years, call it 10,000 times. Would that be a fair assessment?

A. Yeah.

Q. Okay. And you stated that during your training you've studied the effects of alcohol on the human body, right?

A. Yes.

Q. Where did you learn how to examine the effects of alcohol on the human body?

A. I can't tell you specifically when because even

when I was in a veterinarian medical -- as a veterinarian, as a candidate to become a veterinarian in the veterinarian medical school, you study toxicology and pharmacology of drugs. Even at an undergraduate level, you start studying those. When you study pharmacology, which comes from pharmacopeia which means drugs, you study about the chemical nature and the effects there in a classroom, even when I was an undergraduate student. So --

Q. Okay. Now that we understand and kind of your experience and your training, I want to focus specifically on the effects of alcohol on the body.

A. Okay.

Q. I want us to talk specifically about the concept of extrapolation, absorption, elimination.

MR. FLOOD: Your Honor, I'm going to object. May I have the opportunity to take this witness on voir dire on her qualifications to give this opinion?

THE COURT: Sure.

MR. FLOOD: Thank you.

VOIR DIRE EXAMINATION

BY MR. FLOOD:

Q. You stated that you are a Doctor of Veterinary Medicine?

A. Correct.

Q. And I heard the State ask you about what are your qualifications -- or what education you have about the effects of alcohol on the human body, right?

A. Yes.

Q. And you said, I can't really say when? Wasn't that your answer?

A. No. Because I started learning it even in undergraduate school. That's why I say specifically I cannot tell you when. But I can go back and just calculate when I was in undergraduate. I can do that.

Q. Did you learn about the effects of alcohol in a human body in your veterinary education?

A. Not specifically on a human body. At the similar level, what does alcohol do to the cells? We can, you know, differentiate between animals and humans in behavioral ways but at the cellular level. What happened to the drug is the same in animals and in humans. So --

Q. Okay. What specific training have you had on the effects of alcohol on the human body?

A. On the human body, it's when I get involved in forensic toxicology.

Q. Have you had any formal training, education -- I'm sorry -- classroom, degree like your DVM degree? Do you have any of that formal training other than what

you've just kind of picked up after that in the lab on the effects of alcohol on the human body, formal training on that?

A. Formal training is when we go and do D.W.I. cases. That's my training. That's on a conference.

Q. Okay.

A. That's what it was.

MR. FLOOD: Your Honor, I would object, then, to this witness rendering an opinion on the effects of alcohol in the human body.

THE COURT: All right. We're going to take a short break because I have a couple of court matters that I need to address. So, if you will go back with the bailiffs for just a moment. And then your lunch is supposed to arrive at 1:00. So, hopefully we will have you come back in here for a few minutes more before your lunch arrives. So, if you will go with the bailiffs for a moment, please.

THE BAILIFF: All rise.

(Jury leaves courtroom)

THE COURT: Okay. Y'all may be seated.

State, did you have anything on this objection that you wanted to address?

MR. BATY: Yes, Judge. Dr. Guale specifically testified that she has experience in

analysis of tissue and medicine, in pharmacology for an undergraduate, more after her doctorate and that the effects of drugs, alcohol, other things are the same on the human body as they are anywhere else, because they are all the same in the cellular level.

In addition to that, she has stated that she's experienced and has received training at various conferences and D.W.I. specific learning experiences to enable her to testify to the effects of alcohol in the human body. I don't know what more she could have besides -- I don't know what more she could have.

CROSS-EXAMINATION

BY THE COURT:

Q. First of all, I didn't hear -- I know you've got a Doctorate of Veterinary Medicine.

A. Yes.

Q. You don't have an additional Doctorate Degree, right?

A. No.

Q. Do you have a Ph.D.?

A. No.

Q. You have a Master's in toxicology?

A. Yes.

Q. Okay. I think you just misspoke on something, because I didn't hear you say that you took pharmacology

all the way up through your doctorate. You started an undergraduate --

A. And also a Master's.

Q. -- and your Master's?

A. Yes.

Q. Okay.

A. I have advanced pharmacology and toxicology training.

MR. BATY: All the way up through her doctorate?

THE WITNESS: All the way up to my Master's.

MR. BATY: I'm sorry, Your Honor. I misspoke. What did I say?

THE COURT: All the way up to her doctorate.

THE WITNESS: Yeah, Board --

Q. (BY THE COURT) Did you do undergrad, Master's and then Doctorate of Veterinary Medicine?

A. No. I consider the Doctorate of Veterinary Medicine as an undergrad.

Q. Okay.

A. That's why I say that's my undergrad. Also, before that, there was also animal science of study while I was in there. Then I did the veterinary medical

degree and then that's where you study about specific pharmacology and toxicology of drugs. Even though it is on animals, because I'm a veterinarian, to be applied on animals, the scientific basis at the same level is the same. What happens to the alcohol in there, what happens when it comes or the other drugs basically at the same level, it's the same thing.

THE COURT: Anything else?

MR. BATY: Nothing further.

THE COURT: You were going to say something?

VOIR DIRE EXAMINATION (CONT'D.)

BY MR. FLOOD:

Q. So, you got an undergraduate degree? It wouldn't be the equivalent of a medical DVM here.

A. It is equivalent.

Q. Where did you get it?

A. Huh?

Q. Where did you get it?

A. Ethiopia.

Q. So, it was an undergraduate degree?

A. Yes.

Q. So, when I asked you about your -- okay. The State said that you learned through all of these conferences and things. I didn't hear you say that. I

asked you about your formal training on the effects of alcohol in the human body.

And you said, Oh, I get that when we go out and do D.W.I. investigations, right?

A. Okay.

Q. Is that what you said?

A. We have to delineate what it means to learn about the effect of alcohol and drugs on a human body --

Q. Right.

A. -- or the effect of alcohol and drugs on animals, okay? If you had asked me that differentiation, I could have differentiated it for you; but I was going to tell you it's the same thing. You say it's human, you say it's -- but specifically on humans, though, applying that science on humans is when you are dealing with a D.W.I. case. That's where you are going to get it.

Q. But my question was: What was your formal training on the effects of alcohol on the human body?

A. There is no formal training on effects of alcohol on a human body.

Q. Okay.

A. It's either you get a degree in some subject or not. That's what's going to be translating into a formal training is courses or seminars like that. There

is no such degree. It doesn't exist.

Q. Well, but you can --

MR. FLOOD: Judge, my objection still remains that there are obviously qualifications that other people offer to state how they are qualified to testify and give an expert opinion of the effects of alcohol on the human body. And not just coming up here and trying to convince everybody that it's exactly the same as every animal out there, I --

THE WITNESS: But you are not going to find anyone else to do that.

MR. FLOOD: I disagree. I'm sorry.

THE WITNESS: Nobody can provide all these toxicologists that are coming and testifying -- they don't even have a medical knowledge anywhere.

THE COURT: Let's just stop right there, ma'am.

THE WITNESS: They just study pharmacology and toxicology.

THE COURT: Excuse me, ma'am.

THE WITNESS: Yes.

THE COURT: Anything else from the State?

MR. BATY: Yes, briefly, Your Honor.

DIRECT EXAMINATION (CONT'D.)

BY MR. BATY:

Q. Dr. Guale, have you ever been to any conferences regarding driving-while-intoxicated cases?

A. Yes. Correct, I have been.

Q. Have you received training at those conferences regarding toxication and toxicology?

A. Yes.

Q. What sorts of things did you study in your Master's of toxicology?

A. All of the drug effects on a similar level. It doesn't matter which body it is. It is going to be at a similar level, what happens and how it attacks -- what happens to the drug, once it gets in, how it metabolizes, how it's broken up by the cells, by the liver cells; and once it gets in your brain, where it attacks. There is no difference between animal or human. It's going to be the same chemical that it's going to affect; and it's going to be the same process, toxicology process, that would come out. Of course, animals are not going to show the behavior that humans show.

Q. So, at the conferences that you went to, did you receive specific training on the effects of alcohol in the human body?

A. Correct, yes.

Q. And is your testimony here today that during the course of your Master's Degree in toxicology, that you learned the effects of alcohol in animal tissue?

A. General toxicology in animal tissue and human tissue, there is no difference. It is the general toxicology. It's the application of it. You learn the application of it when you are dealing with D.W.I. cases.

Q. Thank you, Dr. Guale.

MR. BATY: No further questions, Your Honor. Pass the witness.

THE COURT: Okay. So, here will be my ruling, that your objection is overruled with regard to the effects of alcohol on the human body. But I anticipate, because of the question that you were asking when Mr. Flood asked if he could take the witness on voir dire, that you are going to go into the theory of absorption and elimination and extrapolation, which there hasn't been any testimony about whether she's qualified specifically with regard to those. Just saying.

Okay. We are going to take a short break so I can handle some court matters.

MR. FLOOD: I would have an objection on

that as well.

THE COURT: What is your objection?

MR. FLOOD: That she hasn't laid or articulated proper qualifications. Everything has been related to animals, so I --

THE COURT: All right. Let's take a short break so I can handle these couple of pleas.

MR. BATY: Your Honor, may we be heard on that before we --

THE COURT: I will give you a chance. I need to take care of Chris and Jane.

MR. BATY: Absolutely. Yes, ma'am.

(Recess taken)

(Jury not present)

THE COURT: All right. Luke, do you have your witness? Are you waiting on something?

MR. BATY: I didn't hear, Judge. What?

THE COURT: Is your witness available?

MR. BATY: She is, yes, Judge.

THE COURT: All right. The defense has made an objection that Dr. Guale is not qualified to testify on matters of extrapolation.

So, State, what's your response to that?

MR. BATY: Your Honor, I would just ask for a few more questions, lay some more predicate.

THE COURT: Go ahead.

MR. BATY: Thank you, Your Honor.

DIRECT EXAMINATION (CONT'D.)

BY MR. BATY:

Q. Dr. Guale, do you have any special certifications in forensic toxicology?

A. Yes.

Q. What certification do you have?

A. I have forensic toxicology specialist certification, obtained from the American Board of Forensic Toxicology.

Q. And in order to become Board certified in forensic toxicology, did you have to study the effects of alcohol particularly with regards to retrograde extrapolation, absorption, and elimination?

A. Correct. That absorption, elimination stuff is strictly common. You know, you have to know that -- you know, to have a degree.

Q. Do you have to know that to become Board certified?

A. Yes.

Q. What's the process to become Board certified by the -- in forensic toxicology?

A. You have the requirement of the degree and you have the requirement of several years of practical

experience and trainings for three years and you also have to go through a rigorous study of the books and articles, everything that's out there in relation to that.

Q. Do you have to take any exams?

A. Yes.

Q. Do you have to pass those exams?

A. Yes.

Q. Do those exams test your ability to conduct retrograde extrapolation analysis?

A. Yes.

Q. Did you pass those exams to become Board certified?

A. Yes.

Q. And have you had any specialized training in retrograde extrapolation?

A. Yes.

Q. Where?

A. Locally at our facility.

Q. Who conducted that training for you?

A. A senior toxicologist.

Q. Was that training part of your process of maintaining your Board certification?

A. Yes. You have to have continuing education points that you have to obtain every year to keep your

certification.

Q. And are you currently at this moment certified by the Board of forensic toxicologists to -- are you a Board certified forensic toxicologist at this moment?

A. Yes.

MR. BATY: Pass the witness, Your Honor.

THE COURT: Mr. Flood.

MR. FLOOD: I just have one question.

VOIR DIRE EXAMINATION (CONT'D.)

BY MR. FLOOD:

Q. All of that training relates to humans?

A. Yes.

MR. FLOOD: I will pass the witness, Your Honor.

THE COURT: Mr. Baty.

MR. BATY: Your Honor, at this time I believe the witness has demonstrated that she is an expert, sufficient under the Rules in order to testify to retrograde extrapolation and the effects of alcohol on the human body and would request the Court to overrule the defense counsel's previous objection.

THE COURT: Mr. Flood, anything other than what you've already said?

MR. FLOOD: No, I have nothing else.

THE COURT: I'm going to allow her to

testify, so I'm going to overrule your objection.

Renee, go get the jury, please, unless the pizza is out there.

MR. FLOOD: I'm sorry. What time are you doing lunch?

THE COURT: It's supposed to be at 1:00.

MR. FLOOD: I'm just curious.

THE COURT: Because you're hungry?

MR. FLOOD: A little bit.

THE COURT: Their food is supposed to be delivered at 1:00.

(Discussion off the record)

THE BAILIFF: All rise.

(Jury enters courtroom)

THE COURT: All right. Please be seated. Mr. Baty, you may proceed.

MR. BATY: Thank you, Your Honor.

DIRECT EXAMINATION (CONT'D.)

BY MR. BATY:

Q. Now, doctor, where we left off before the jury went out, with your qualifications and experience, I want to shift our focus and talk specifically about the effects of alcohol in the human body. So, I want to start with the concept of extrapolation. What is retrograde extrapolation?

A. Retrograde extrapolation is a mathematical deduction of the level of the alcohol from a known time. Like, for instance, if the alcohol level at a known time, like 12:00 o'clock, is .1; and you would want to know how much would it be two hours before, then there are scientific facts in numbers, you know, figures that you need to add and include to calculate what would it be two hours ago. That's called extrapolation.

Q. So, explain to me what we would need in order to -- in order to take a known blood sample and a known quantity of alcohol of someone's blood and extrapolate it back a couple hours.

A. In those -- in that process, as we all are different, we process drugs and alcohols differently. So a person's weight and height and sex may make a difference in some of the vitals that we are going to increase in the calculation. Like for instance how much you've eaten and drinking, that's going to affect the absorption or how fast the alcohol in your stomach will go through absorption. All of those informations --

Q. Let's pause right there. You say "absorption". What does absorption mean?

A. Absorption means as soon as you put the drug or the water or anything that you put through your mouth, it goes through your abdomen to retract -- or it goes

through your stomach, and then the stomach will churn it. Some absorption will take place there, but it will just move it to your intestine.

So, the alcohol, the majority of the alcohol, will be absorbed through your intestine because your intestine has got blood vessels surrounding to it. So, that's how by diffusion it will go through the blood and it goes through a circulation system and then it gets distributed. That's why it's called absorption.

Q. So what happens after the body absorbs alcohol?

A. Once it is absorbed, it circulates in your body and is distributed to all body parts. Alcohol has got a characteristic to go to where the water is, all the cells. Stuff that we have in our body have water. It goes to the water -- it prefers to go to the water in part more, you know, than the fatty part. So, you know, when it distributes, that also has a distribution factor.

For instance, if a person has -- the weight of that person, it comes from the fat or from the muscle. It makes a difference. So that's why weight is very important. Sex is very important. And it distributes through your body. It goes to your brain. That's where, you know, the effect -- the main effect of alcohol comes from because it goes to your brain. It

affects the central nervous system, and then the central nervous system affects your physical body. That's how your physical body is going to get affected.

Then once it goes there, it goes to the liver, and then it becomes metabolized or broken down and then gets emanated as water and carbon dioxide.

Q. So, are you able to say to a certainty how fast someone absorbs alcohol?

A. It's variable. It's all variable. Depends whether you have food with it or not or it depends whether -- you know, the type of alcohol, whether it's a liquor or alcohol or a medium-strength alcohol. That also has a factor. And so -- and some medical conditions also have factors. So, excluding the extremes which could be 50 minutes to hours, the average person would absorb alcohol within one hour. That's why we call "average".

Q. And once somebody has absorbed that alcohol within the average of one hour, are you able to then determine how fast somebody's eliminating alcohol?

A. Yes.

Q. And what would you need in order to determine how fast someone is eliminating alcohol? What kind of facts would you need?

A. Whether -- in the elimination, what matters

is -- there are certain conditions where the person is going to eliminate faster and certain conditions it would be normal. But there is always a constant rate. Your body processes a constant rate because there is a rate-limiting factor in a person where the enzyme involved in the elimination is constant. So, it doesn't vary from time to time. So, it's a constant elimination. We call it zero autokinetics. So, because alcohol has got that property, the elimination rate is established already because it's been studied over and over and over on individuals for putting themselves for experiments. So, based on that data collected, scientifically collected data, a person in average would eliminate a .015 gram of alcohol per hour. So, that's what we apply. But sometimes you could have a faster elimination rate, and sometimes you could have a slower elimination rate. So, that's why we take the average.

Q. So, Dr. Guale --

THE COURT: I'm sorry. I'm going to pause you because your food just got delivered. So, ladies and gentlemen, we are going to take a break for lunch. Remember the rules that I gave you yesterday. You are not to discuss the case yet.

Lawyers, let's try 45 minutes. Is that enough time for you?

MR. FLOOD: Sure.

MR. BATY: Yes, Your Honor. That's fine.

THE COURT: We are going to take a 45-minute break, so we will resume at 1:45. Please go with the bailiff.

THE BAILIFF: All rise.

(Jury leaves courtroom)

THE COURT: Okay. I totally put you on the spot because you weren't going to disagree with me in front of the jury. Do you need an hour? Because you asked me about lunch, do you need an hour for some reason?

MR. FLOOD: No, no, that's okay. That's fine.

THE COURT: All right.

(Luncheon recess)

THE BAILIFF: All rise.

(Jury enters courtroom)

THE COURT: All right. Please be seated.

Mr. Baty, you may proceed.

MR. BATY: Thank you, Your Honor.

Q. (BY MR. BATY) Dr. Guale, I want to return. Before we broke we had some discussion about your education, your background. I just want to clarify a few things with you. You stated earlier that it's not

possible to obtain a degree in the effects of alcohol in the body, right?

A. Correct.

Q. Did you study that course of subject in the duration and in the larger scope of obtaining a degree in veterinary medicine, for example? Is that something you studied, the effects of alcohol?

A. Yes.

Q. Okay. And did you study the effects of alcohol in a larger course of study on pharmacology?

A. Yes.

Q. And in a large course of study on toxicology?

A. Yes.

Q. And you studied the effects of alcohol in a larger course of study on those -- the pharmacological, Intoxilogical (sic) events and effects in the human body, correct?

A. Correct.

Q. Okay. Now, have you had any specific training with regards to retrograde extrapolation?

A. Yes.

Q. What training?

A. I'm sorry?

Q. What training?

A. Training by senior toxicologists where we are

in the institute.

Q. Have you been to any conferences with regards to the investigation of driving-while-intoxicated cases?

A. Yes.

Q. In the course of those conferences, did you get any training on retrograde extrapolation?

A. Yes.

Q. And did you receive any training on the effects of alcohol in the human body?

A. Yes.

Q. Okay. I want to move back to what we were talking about before we broke. We had been mentioning retrograde extrapolation. You talked to us specifically about the way the body processes alcohol, both absorbing it and eliminating it.

A. Yes.

Q. Now, Dr. Guale, is it possible to determine what -- to take a known blood sample at a known time and retrograde extrapolate back to a previous time to determine how intoxicated or what the blood level, blood alcohol level, of somebody would have been prior to the test?

A. Yes.

Q. And what kind of factors would you need to know in order to do that?

A. All the factors that affect the alcohol metabolism is, you know, the weight, the height, the age, the sex, whether the person ate or not ate or what kind of, you know, drink that the person had, whether it is a beer or liquor. The type of the drink also matters. Those are the factors that you need to have to --

Q. What about how many drinks somebody had?

A. How many drinks somebody had, if you want to do anterograde, that would be necessary. But if you want to do a retrograde, you don't really need that information.

Q. What about the time of first stop or first drink?

A. You need to have the first time of the drink, the last time of the drink, and the time of the incident in addition to those demographic information.

Q. Okay. Let me pose a hypothetical situation to you. Suppose someone started drinking at 1800 hours, so 6:00 o'clock in the evening.

Do you need something to write with?

A. Yes, I have it.

Q. Okay. So, suppose somebody started drinking at 1800 hours, 6:00 o'clock in the evening.

A. Okay.

Q. They drank eight beers.

A. Okay.

Q. They stopped drinking at 2215 hours, so 10:15 in the evening.

A. Okay.

Q. And then they drove and were pulled over at 2345 hours, so 11:45 in the evening.

A. Okay.

Q. A blood sample was taken from them at 0230 hours, so 2:30 in the morning.

A. Okay.

Q. And that blood sample, the result of that blood test was .149. And assume this person is of average height, average weight, is a male, and that they absorbed at a normal, average weight which you said was an hour, correct?

A. Yes.

Q. Now, given all of those facts, would you be able to extrapolate a person's -- in that hypothetical situation, a person's blood alcohol level at the time that they were stopped for a traffic violation at 11:45?

A. Okay. In order to do the extrapolation, based on the facts or the hypothetical facts that I have here, one, I have to assume elimination. So, I also have to assume an average elimination rate for an average

person, which is -- we usually use 0.015 grams of alcohol per hour. And with that there is two hours and 45 minutes between the blood draw where we exactly get the concentration of the blood alcohol which is .149 back to 2345 which is a stop time. So, the interesting point that we are using is how much would it be at 2345, when the person was stopped?

So, what I have to do is multiply the 2 and -- 2.45 hours by .015 and add that, because we are eliminating -- he is reducing it so I have to add it back to the number and come up with a figure which comes to be -- which comes to be 0.190 grams of alcohol per hundred milliliters.

Q. Zero --

A. .19.

Q. .19?

A. Yes.

Q. And if you know, what's the legal limit for driving in the State of Texas, your blood-alcohol level?

A. 0.08.

Q. So, this 0.19 is over twice the legal limit, correct?

A. Correct.

Q. Now let me pose to you -- let me change the facts a little bit. Let's assume that the person in the

hypothetical situation is not the average person and absorbs a little slower for whatever reason.

Are you -- is it possible -- is it likely that giving the benefit of the doubt, that that person would be still above a .08 blood-alcohol level at the time of driving?

A. Yes.

Q. How likely is that?

MR. FLOOD: Objection. That calls for speculation.

THE COURT: Sustained.

Q. (BY MR. BATY) How unlikely would it be that they are below a .08?

MR. FLOOD: Objection. That calls for speculation.

THE COURT: Sustained.

MR. BATY: I pass the witness, Your Honor.

THE COURT: Mr. Flood.

MR. FLOOD: Thank you, Your Honor.

CROSS-EXAMINATION

BY MR. FLOOD:

Q. Dr. Guale, you're not a blood analyst, are you?

A. Huh?

Q. You are not a blood analyst, are you?

A. No, I don't do the analysis.

Q. Your degree was in Doctor of Veterinarian Medicine, correct?

A. Correct.

Q. But it was like in an undergraduate degree?

A. Yes.

Q. And you said that -- you said that you think that the effects of alcohol on animals is exactly the same as the effects of alcohol on humans?

A. The science of the serum level is the same. They don't respond in the same way. When they get drunk, we call them bonkers.

Q. It certainly wouldn't -- like a drunk dog would not be the same as a drunk human, right?

A. Yeah. The response is different. But at the serum level, how the alcohol goes to the brain and how the brain dictates what the effect of the body is --

Q. Okay. So, Doctrine of Veterinarian Medicine in the United States is like the equivalent of a medical doctor, same number of years of schooling and after college, right?

A. Correct.

Q. But your degree you received in undergraduate school, correct?

A. I consider it undergraduate because I did my Master's. That's why I consider it undergraduate.

Other than that, actually the curriculum back home which is Ethiopia is six years. It's superior than what the curriculum here is.

Q. You got a Master's in Veterinarian Medicine?

A. No. I got a Master's in toxicology.

Q. So, the DVM, the Doctrine of Veterinary Medicine, was something that was not done in the United States?

A. That was in Ethiopia, where I came from.

Q. Okay. I would like to ask you a couple of questions about this absorption and elimination, okay?

A. Okay.

Q. You were talking a lot about averages and assuming things, right?

A. Uh-huh.

Q. But you don't know what this person's absorption and elimination rates would be like, right?

A. Not in particular to that person.

Q. Okay.

A. But there is an average that was established through experiments using different things.

Q. Right. And so everybody is different, though, right?

A. Correct.

Q. So, you don't know what his physical --

physiology of his body is like, right?

A. I just use what's given as a physiology of a human person, yeah.

Q. So the answer is, no, you don't know anything about this person in particular?

A. No.

Q. Okay. So, when you said that -- I mean, when people start drinking, they obviously start out at a zero, right, with no alcohol if they haven't had anything to drink?

A. Uh-huh.

Q. It's common misconception that people are always going to be at a higher B.A.C. at some point earlier in time, right? That's not always the case, is it? Right?

A. Depending on the facts.

Q. Right?

A. Depending on the facts.

Q. Right. They could be higher or lower or the same?

A. Could be.

Q. Right?

A. Uh-huh.

Q. I mean, at some point they are going to be rising, right?

A. It depends on if they are drinking more and more and more and they would be going up.

Q. I guess I'm not making myself clear.

A person -- everybody who drinks, they are always going to be in the absorption phase, rising for a certain period of time?

A. Yes.

Q. Yes, everybody. Because that's how you get up to a certain B.A.C. level, right?

A. Yes.

Q. Okay. So just because a person might be a .149 later, that doesn't always mean that they were higher at some point earlier. They could also be lower, correct?

A. Correct.

Q. Okay. And you said that a person could still be rising for up to two hours?

A. There are --

Q. Is that what you said?

A. There is a record -- it's exceptionally long. There are two instincts. There are people that can absorb in 50 minutes which are extremely slow. There are people that are extremely fast. There are people who absorbs for two hours. They are extremely too long. Those populations are very minor.

Q. Extremes?

A. Yeah.

Q. What causes the slower absorption, the slower rising? They ate, right?

A. One of -- yeah, one of the culprit is they ate.

Q. So if you got a person that admits to eating or if a person has eaten, that will slow how long they are rising for?

A. Correct.

Q. Okay. So let's say that you use -- so two hours is extreme. So, 90 minutes is not in the extreme. That's in the reasonable range, correct?

A. That's reasonable, yes.

Q. Okay. So, if you had 10:15 at the time of last drink to 11:45, stop time, is that 90 minutes?

A. Yes.

Q. Okay. So, if a person had eaten, you are saying that it's reasonable to assume that they could still be going up, correct?

A. Yeah.

Q. Okay. That's very reasonable. You wouldn't argue with that at all, right?

A. Was the -- was the fact that he could be in an exceptional group, yeah.

Q. Well, not only that, you just said that based

on even a reasonable assumption of 90 minutes, if a person ate, if their last drink was at 10:15 and they were stopped at 11:45, that under that scenario they would still be going up?

A. Going up. At 11:45, it's going to be one hour and --

Q. Yes, at 11:45 they would be going up?

A. Yes.

Q. Okay. So what matters is what the B.A.C. was at the time a person was driving, correct?

A. Correct.

Q. Okay. So, if they were still going up absorbing and then potentially even past that, correct, they could still be going up even longer, according to what you said?

A. That's possible, uh-huh.

Q. Okay. So, with that in mind, then, can you tell me what the B.A.C. in this case would have been at the time of driving at 11:45? Can you say what the number is?

A. The one that I use --

Q. If they are still absorbing --

A. If they are still absorbing --

Q. -- what's the B.A.C.?

A. I could not specifically say. I can give you a

range; but I cannot specifically say because when you are absorbing, it's very hard to -- you can, what, estimate it; but you cannot specifically say this would be it, yeah.

Q. Right. Because if a person is still going up and absorbing, you can't say what their B.A.C. would be, right?

A. It's very difficult.

Q. Yeah, very difficult. And all of the scientific literature out there tells you it's something that you should not -- very, very strong cautions -- you should not even attempt to do that extrapolation if a person is still rising, right?

A. If you are assuming that the person may be rising --

Q. Right. That's what I'm asking.

A. -- and you can only get it with a range.

Q. Right.

A. You can't go to pinpoint on that at one point, yeah.

Q. So, there's two different scenarios. And my scenario is reasonable, like you said. A person could still --

MR. BATY: Objection, argumentative.

THE COURT: Overruled.

Q. (BY MR. FLOOD) A person could still be absorbing under that scenario, right?

A. Uh-huh.

Q. And the State's scenario they gave you, they want you to assume that he's already going down, right?

A. Yeah.

Q. Right? But we don't know which one of those it is, right? You don't know, do you?

A. I don't but --

Q. Do you know if he was absorbing or eliminating that night, at the time that he was stopped?

A. No, I don't.

Q. Okay.

A. We are just only using what's been published.

Q. Okay.

MR. FLOOD: I will pass, ma'am.

THE COURT: I'm sorry, ma'am. Go ahead and finish what you were saying.

THE WITNESS: I'm just using only what's been published on a study. I really don't know about that person.

Q. (BY MR. FLOOD) About that person. Thank you. I'm sorry.

MR. FLOOD: I will pass the witness.

THE COURT: All right. Mr. Baty.

REDIRECT EXAMINATION

BY MR. BATY:

Q. Dr. Guale, you said you would give a range. What range would that be if -- based on what the defense just asked you, what would that range most likely be?

MR. FLOOD: Your Honor, I'm sorry, but I just -- I object to speculation because of the inherent unreliability of extrapolating into the absorption phase as she testified and said, I don't know what it would be. It's unreliable if the person is in the elimination phase.

THE COURT: It's overruled. Go ahead.

MR. BATY: Thank you.

A. Okay. Supposed he was absorbing at that time which is 11:45, okay? And we add an absorbed amount for 30 minutes and subtract that, and then what I can do is subtract the .015 or subtract the .02 which you can possibly absorb within that 30 minutes and subtract it from .19 which is going to be 0.0 -- I mean .170. That's an estimation. So, the range would be from .170 to .190.

Q. (BY MR. BATY) So, .170 is how much above .08, the legal limit in the State of Texas?

A. It's twice.

MR. BATY: Pass the witness, Your Honor.

THE COURT: Mr. Flood.

RECROSS-EXAMINATION

BY MR. FLOOD:

Q. Dr. Guale, do you know if the blood that they tested -- can you prove the blood that they tested in this case, do you know that it was Mr. Gonzalez's?

A. All we know, what we tested, the blood is associated with his name. That's all we know.

Q. Is the number --

A. There is a name. There is a number that we associate the blood with.

MR. FLOOD: I will pass the witness.

THE COURT: Mr. Baty.

MR. BATY: No further questions, Your Honor.

THE COURT: May this witness be excused? Any objections from the State?

MR. BATY: Your Honor, I would ask that she be left on call, just in case other evidence comes in that she might want to sit in as an expert witness.

THE COURT: Okay. Then that's what we will have you do, ma'am. If you will step out in the hallway for me, please.

All right. State?

MR. BATY: State rests at this time, Your

Honor.

(END OF REQUESTED EXCERPT)

(No charge for this page)

Pierce, Michal (IFS)

From: Young, Cynthia (IFS)
Subject: Court Testimony
Attachments: COURT TESTIMONY EVALUATION, rev 6.docx

From: Young, Cynthia (IFS)
Sent: Tuesday, June 30, 2015 4:37 PM
To: 'Tyler@tylerflood.com' <Tyler@tylerflood.com>
Subject: Court Testimony

Good afternoon Mr. Flood,

Toxicologists, Josie Hollowell and Dr. Fessessework Guale, testified on 06/26/15, in the case of State of Texas vs. Matt Sechrist. In order to fulfill a specific requirement for our laboratory accreditation, we seek feedback from attorneys when our analyst testify. This feedback is vital to our quality assurance program.

Please complete the attached evaluation form for each analyst and return by fax to 713-796-6794 or by email to cynthia.young@ifs.hctx.net. The laboratory case number is IFS14-16996.

Thank you for your assistance,

Cynthia Young, BS, D-ABFT-FT
Quality Manager
Harris County Institute of Forensic Sciences
1885 Old Spanish Trail
Houston, Texas 77054
713-796-6912
713-796-6794 (fax)
cynthia.young@ifs.hctx.net

Pierce, Michal (IFS)

From: Young, Cynthia (IFS)
Subject: Court Testimony
Attachments: COURT TESTIMONY EVALUATION, rev 6.docx

From: Young, Cynthia (IFS)
Sent: Friday, August 26, 2016 4:40 PM
To: alli@tylerflood.com
Subject: Court Testimony

Good afternoon Ms. Lannon,

Toxicologists, Kim Peterson and Dr. Fessessework Guale, testified on 08/19/16, in the case of State of Texas vs. Rusbel Gonzalez. In order to fulfill a specific requirement for our laboratory accreditation, we seek feedback from attorneys when our analyst testify. This feedback is vital to our quality assurance program.

Please complete the attached evaluation form for each analyst and return by fax to 713-796-6794 or by email to cynthia.young@ifs.hctx.net. The laboratory case number is IFS16-02572.

Thank you for your assistance,

Cynthia Young, BS, D-ABFT-FT
Quality Manager
Harris County Institute of Forensic Sciences
1885 Old Spanish Trail
Houston, Texas 77054
713-796-6912
713-796-6794 (fax)
cynthia.young@ifs.hctx.net

EXHIBIT C

Belinda Hill
First Assistant

Criminal Justice Center
1201 Franklin, Suite 600
Houston, Texas 77002-1901

HARRIS COUNTY DISTRICT ATTORNEY
DEVON ANDERSON

September 19, 2016

VIA U.S. AND ELECTRONIC MAIL:
Lynn Garcia, General Counsel
Texas Forensic Science Commission
1700 North Congress Avenue, Suite 445
Austin, Texas 78701

Re: *Request for Assistance regarding Dr. Fessessework Guale, HCIFS*

Dear Mrs. Garcia,

As you may be aware, the Harris County Institute of Forensic Sciences ("HCIFS") recently made a disclosure to the Harris County District Attorney's Office about Dr. Fessessework Guale, Toxicology Analytical Operations Manager for HCIFS. The disclosure involved a concern that Dr. Guale had testified in Harris County criminal court that she possessed a Master of Science degree in Toxicology when, in fact, she holds a Master of Science degree in Physiological Science.

Upon receipt of this information, we made immediate disclosure to the criminal defense bar, and began gathering case information and trial transcripts. This process is still ongoing.

Shortly after making disclosure to the defense bar, we learned that the documents provided to defense counsel in response to standard discovery motions on blood toxicology cases have indicated that Dr. Guale had a Master of Science degree in Toxicology, including her curriculum vitae ("CV") and her ASCLD/Lab Statement of Qualifications ("SOQ"). Additionally, Dr. Guale has testified that she is board certified with the American Board of Forensic Toxicologists ("ABFT") as a "Forensic Toxicology Specialist." However, on August 1, 2014, the ABFT notified their membership that the designation for "Forensic Toxicology Specialists" had been changed to "Diplomates." Most recently, we have learned that Dr. Guale's employment application for her job at HCIFS indicated that she held a Master of Science degree with a major in Toxicology, a minor in Physiological Science, and graduate studies in Toxicology.

We are seeking assistance from the Texas Forensic Science Commission to help determine the following:

1) Whether the educational background portion of Dr. Guale's sworn testimony constitutes professional negligence or misconduct that would substantially affect the integrity of the results of a forensic analysis conducted by an accredited crime laboratory;

2) Whether the substantive portion of Dr. Guale's sworn testimony regarding toxicology constitutes professional negligence or misconduct that would substantially affect the integrity of the results of a forensic analysis conducted by an accredited laboratory; and

3) If there are any other areas of concern regarding the subject matter on which Dr. Guale has been called to testify as a forensic science expert in criminal court.

We are not scientists, we are lawyers. HCIFS has been extremely cooperative and forthcoming about this issue; however, we believe that based on the evolving nature of the allegations it would be prudent to have Dr. Guale's testimony reviewed by independent experts in the field of toxicology to determine whether her misstatements are limited to her educational background or if there is cause for concern about the substance of her testimony.

The Harris County District Attorney's Office will provide any and all case information, trial transcripts, and laboratory reports needed for this review. We appreciate any help the Commission is able to provide

Sincerely,

Devon Anderson

EXHIBIT D

TOX.16.03 Root Cause Analysis

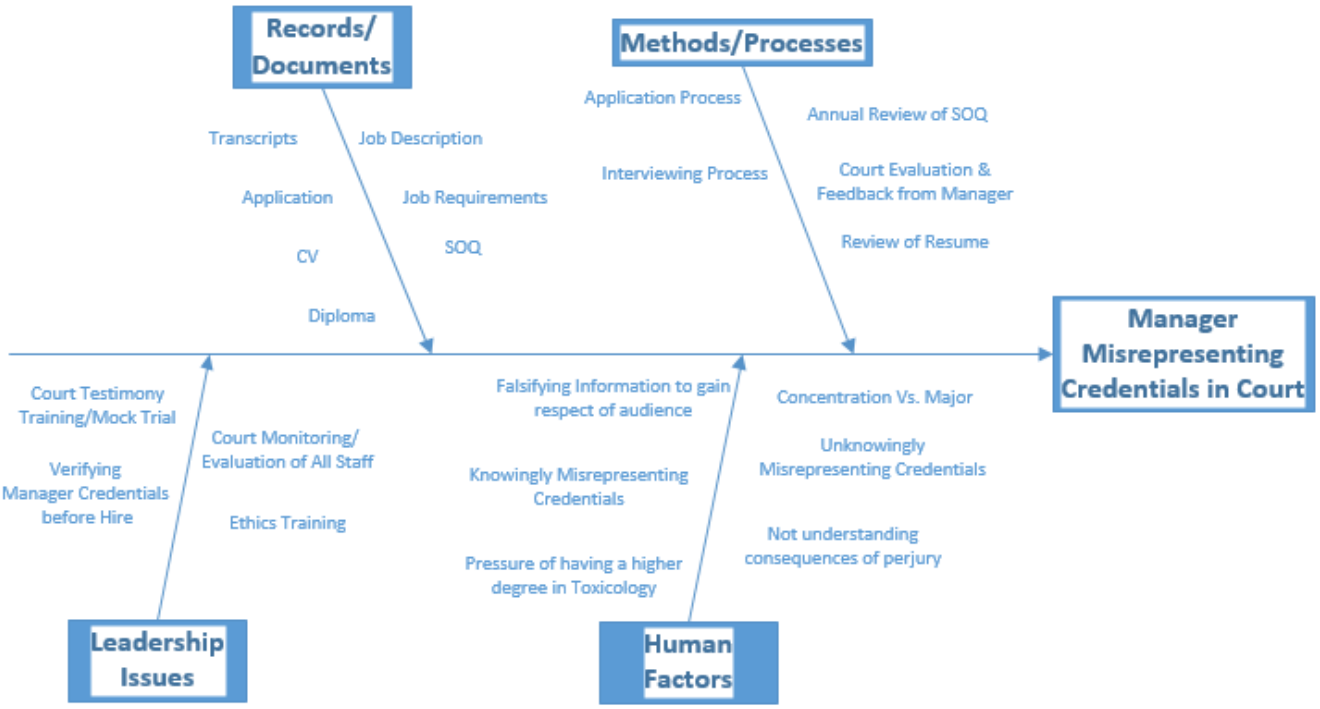
Define Event:

In late August 2016 it was discovered the Analytical Operations Manager (AOM) was misstating the title of her Master of Science degree during court testimony.

RCA Team- Quality Director, Quality Manager, QA/QC Project Coordinators, Director of Toxicology and Chemistry, and Chief Toxicologist.

Triggers- Unclear testimony regarding the nature of her degrees led to management review of provided documentation and past court transcripts, as well as direct observation of testimony.

Find Possible Causes:



See summary that overlaps Defining Event & Finding Potential Causes for CAR.

Find the Root Cause:

Records/Documents

Were all the records containing her credentials consistent with each other?

→ NO. The major stated on her **transcript** and **diploma** did not match what was written on her job **application, CV, or SOQ**.

Did she try to hide her true major by withholding documents?

→ NO. The diploma was in her Q-Pulse People file. If she submitted her diploma, she was not hiding her true major.

Did she misrepresent credentials in order to qualify for her position?

→ NO. She met the criteria of her initial and ultimate **job description** and was qualified to perform her **required duties.** There was no need for her to misrepresent credentials in order to gain employment or a promotion.

Methods/Processes

Were her credentials verified at the time of hiring?

→ UNKNOWN. The **application process** did not require official transcripts to be submitted by applicants in 2006.**(A)** **Interviews** varied; it was at the discretion of the hiring manager to verify credentials. Her hiring manager is no longer employed by the office.

Were her **CV** and **SOQ** checked for accuracy?

→ NO. Staff CVs are currently not checked. SOQs were often reviewed for format and consistency with duties by QA personnel; however, up until this point they were normally not checked against diplomas or transcripts.**(B)** A misstated degree would not have been caught unless someone compared the SOQ against the diploma or transcript.

Was there a lack of **court monitoring and evaluation**?

→ MAYBE. Toxicology staff, particularly managers, were historically evaluated by attorneys or other court parties, not crime lab personnel.**(C)** Earlier monitoring would have caught the misrepresentation on the stand only if the manager was aware of her degree as stated in her diploma.

Leadership Issues

Were opportunities missed early on to **verify her credentials** or **monitor her court testimony**?

→UNKNOWN. Again, it is unclear if her hiring manager verified her credentials or observed her testify in court. If her hiring manager was aware of the discrepancy between her application and SOQ and did not take action, then it is likely the hiring manager would not have acted if she heard her misstate her credentials on the stand.

Did the agency fail to provide **testimony training**?

→NO. Accreditation mandates training for staff in forensic science and criminal and civil law procedure. The AOM attended general forensic science knowledge and general court testimony training sessions throughout her career at IFS. Although the AOM had participated in a **mock trial** during her first year of employment, she did not complete a mock trial when the scope of her testimony changed. It remains unknown if a mock trial would have led to the issue being caught sooner.

Did the agency fail to provide **ethics training**?

→NO. Accreditation mandates ethics. training for laboratory personnel. The AOM had attended multiple ethics training sessions throughout her career at IFS.

Human Factors

Did she confuse the concepts of **course concentration** and **major**?

→NO. Neither the educational institution nor her transcript provided evidence that her program offered a toxicology concentration or toxicology emphasis. Nevertheless, the AOM felt strongly that her toxicology courses and toxicology research meant that her degree was "in toxicology."

Was there **pressure** from staff or agency management to possess a higher degree in "toxicology"?

→NO. The AOM possessed multiple post-graduate degrees. She was in a director-level position despite the fact that none of them contained the word "toxicology."

Was the misrepresentation of her credentials done so maliciously?

→NO. The AOM did not have a history of falsifying results or records. She was **not known to intentionally misrepresent** facts.

Did the AOM wish to curtail the process of being qualified as an expert in toxicology?

→YES. She was uncomfortable with the adversarial nature of the courtroom. When attorneys **qualify an expert witness** for the jury, a series of questions are asked about the witness's education, training, and experience. The more relevant one's education, training, and experience is to their field of expertise, the faster the attorney can qualify the witness. Irrelevant degrees may prompt additional questions from an attorney.

Did she understand the consequences her actions would have on the cases and her career?

→NO. The AOM considered the conflation of her true degree as innocuous, and that others would find it innocuous, as well. The associated consequences, up to and including **perjury**, were not on her radar, and therefore, they were not a deterrent. Even when confronted with her wrongdoing, she did not fully appreciate the consequences her actions had within the criminal justice system.

See summary for solutions and action (Corrective Action & Preventative Action)

Preventative changes that were already implemented after the AOM was hired:

(A) Currently, lab policy mandates official transcripts and/or diplomas to be checked before hiring.

Preventative changes that were implemented after the incident:

(B) Lab policy has been changed to require records to be submitted with every SOQ and CV revision.
(C) Re-emphasized existing IFS testimony monitoring policy to stress the importance of managers receiving direct testimony observation by IFS personnel.

Measure and Assess:

1) Further ethics discussions with the staff showed all understood the severity and ramifications of misrepresenting credentials.
2) SOQ reviews showed the need to request supporting records from current staff. All SOQs and CVs have been updated with supporting records.
3) Closed RCA October 21, 2016

RECORD OF TRAINING
MODULE XVI: COURTROOM TESTIMONY

Employee name: Fessessework Gwale

Procedure	Training Method	Trainee	Trainer	Date of Training
Courtroom attendance: Vehicles and Parking				9/18/13
Courtroom Attendance: Observation				
Mock Trial	O, P	FG	/	12/12/06
In-house trainings	O	FG	LAN	9/20/12 (2)
Live or Internet presentations	O	FG	RTI	1/13/12, 1/26/12, 9/27/13

TRAINING AGREEMENT

EMPLOYEE: Fessessework Gwale DATE: 9/19/13

EMPLOYEE STATUS:
- ☐ New Hire
- ☐ New/Revised Procedure
- ☐ Retraining for Remedial Purposes
- ☐ Verification of Employees Performance

TRAINER: LAN Vichell DATE: 09/2013

COMMENTS:

The employee can perform the indicated procedures with minimal supervision.

ASSESSMENT COMPLETED BY: Ashlyn Beard DATE: 9/20/13

PERFORMANCE ASSESSMENT METHOD:
- ☐ Competency Test
- ☐ Proficiency Test
- ☐ Oral Exam

evaluations

MANAGER: _____ DATE: 9/20/13

*TRAINING METHOD:

R = Read Procedural Steps
O = Observe demonstration
P = Perform with Supervision
PM = Perform without Supervision

Certificate of Attendance

is hereby granted to

FESSESSEWORK GUALE

To certify attendance at the training class:

"Ethics Training"

a 2.0 hour class held on December 9, 2009

Human Resources & Risk Management

HARRIS COUNTY 1836 TEXAS

Debbie S. Chapman, PHR

Training Administrator

Certificate of Completion

This certifies that

Fessessework Guale

Completed the

Jon S. Byrd, M.S.

Confirmation Bias, Ethics, and Mistakes in Forensics

Forensic Ethics Seminar

May 12, 2010

Sponsored by the

Harris County Institute of Forensic Sciences

Ashraf Mozayani, Ph.D., D-ABFT
Crime Laboratory Director

Luis A. Sanchez, M.D.
Chief Medical Examiner

Fessessework Guale

Has attended and met the requirements of the on-line course:

Expert Testimony for the Prosecutor and Scientist

On

1/13/2012

This course was provided with funding from National Institute of Justice

This course provided one contact hour

Certificate Number: 1096941996
For further information: www.rti.org/forensiced

Fessessework Guale

Has attended and met the requirements of the on-line course:

Expert Testimony for the Prosecutor and Scientist II

On

1/26/2012

This course was provided with funding from National Institute of Justice

This course provided one contact hour

Certificate Number: 1097341629
For further information: www.rti.org/forensiced

Luis A. Sanchez, M.D.
Chief Medical Examiner

Main: (713) 796-9292
Fax: (713) 796-6844

Harris County Institute of Forensic Sciences

Expert Testimony Training – Logistics
MEETING TITLE

9/20/12	1st floor classroom	1:30 pm – 2:00 pm
DATE	LOCATION	TIME

	NAME (Typed or Printed)	SIGNATURE
1	Dr. Ashraf Mozayani	
2	Andre Salazar	
3	Dr. Anna Kelly	
4	Ashlyn Beard	
5	Dr. Charlotte Baker	
6	Collin Clay	
7	Crystal Arndt	
8	Dana Mike	
9	DeShaun Alexander	
10	Dr. Fessessework Guale	
11	Fredria Shaw	
12	Fu Tian	
13	Glenna Thomas	
14	Dr. Hsin-Hung Chen	
15	Jameaker Dumas	
16	James Sailors	
17	Dr. Jeff Walterscheid	
18	Josie Hollowell	
19	Linda Alvarado	
20	Linda Nickell	

	NAME (Typed or Printed)	SIGNATURE
21	Meagan Ocanas	Meag Ocañas
22	Paola Velasco	
23	Patti Small	Patti Small
24	Dr. Samuel Wyllie	
25	Angela Mwadime	
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Luis A. Sanchez, M.D.
Chief Medical Examiner

Main: (713) 796-9292
Fax: (713) 796-6844

Harris County Institute of Forensic Sciences

Expert Testimony Training – Analogies
MEETING TITLE

9/20/12	1st floor classroom	2:00 pm – 2:30 pm
DATE	LOCATION	TIME

	NAME (Typed or Printed)	SIGNATURE
1	Dr. Ashraf Mozayani	
2	Andre Salazar	
3	Dr. Anna Kelly	
4	Ashlyn Beard	Ashlyn Beard
5	Dr. Charlotte Baker	Charlotte Baker
6	Collin Clay	Collin Clay
7	Crystal Arndt	Crystal Arndt
8	Dana Mike	
9	DeShaun Alexander	
10	Dr. Fessessework Guale	F-Guale
11	Fredria Shaw	
12	Fu Tian	
13	Glenna Thomas	Glenna Thomas
14	Dr. Hsin-Hung Chen	
15	Jameaker Dumas	Jameaker Dumas
16	James Sailors	
17	Dr. Jeff Walterscheid	
18	Josie Hollowell	Josie Hollowell
19	Linda Alvarado	Linda Alvarado
20	Linda Nickell	

	NAME (Typed or Printed)	SIGNATURE
21	Meagan Ocanas	Meagan Ocañas
22	Paola Velasco	
23	Patti Small	
24	Dr. Samuel Wyllie	
25	Angela Mwadime	
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AGENDA – General Knowledge of Forensic Science

Wednesday, August 21, 2013

- **8:30am – Introduction (Ms. Pierce)**
- **9:00am – Drug Chemistry (Ms. McClain)**

- **BREAK**

- **9:45am – Toxicology (Dr. Waltersheid)**
- **10:15am – Firearms (Mr. Baldwin)**

- **BREAK**

- **11:00am – Trace (Dr. Davis)**
- **11:30am- Serology/DNA (Ms. Freeman)**

Luis A. Sanchez, M.D.
Chief Medical Examiner

Main: (713) 796-9292
Fax: (713) 796-6844

Harris County Institute of Forensic Sciences

	Crime Laboratory Staff – Mandatory Meeting General Forensic Science Training 1st Floor Classroom 8:30 am – 11:30 am	
	Lab Personnel	**Signature**
1.	Aguilar de Alba, Ana Karina	
2.	Alexander, DeShaun	
3.	Alvarado, Linda	
4.	Arndt, Crystal	
5.	Baker, Charlotte	
6.	Baldwin, Robert	
7.	Beard, Ashlyn	
8.	Binder, LaToya	
9.	Bruns, Bradley	
10.	Cao, Tuan	
11.	Cavalier, Dimika	
12.	Chen, Michael	
13.	Clay, Collin	
14.	Crandell, Katelyn	
15.	Davis, William	
16.	Disiere, Brittany	
17.	Dumas, Jameaker	
18.	Dupre, Jill	
19.	Ellis, Michelle	
20.	Gaswint, Jason	
21.	Guale, Fessessework	
22.	Hohler, Melinda K. Wilson	
23.	Hollowell, Josie	
	Faulkner, Anthony	

	Crime Laboratory Staff – Mandatory Meeting General Forensic Science Training 1st Floor Classroom 8:30 am – 11:30 am	
	Lab Personnel	**Signature**
24.	Jiang, Julia	
25.	Kelly, Anna	
26.	LaPorte, Dawn	
27.	Lenoir, Melissa	
28.	McClain, Kay	
29.	Mike, Dana	
30.	Mwadime, Angela R.	
31.	Ng, Diana	
32.	Nguyen, Khanh	
33.	Nickell, Linda	
34.	Ocanas, Meagan	
35.	Pierce, Michal	
36.	Reach, Shrey	
37.	Rizvi, Shaheen	
38.	Sailors, James	
39.	Salazar, Andre	
40.	Samms, Warren	
41.	Santillan, Abel	
42.	Schroeder, Jason L.	
43.	Shahreza, Shahriar	
44.	Shaw, Fredria	
45.	Small, Patricia	
46.	Theodore, Richele	
47.	Thomas, Glenna	

	Crime Laboratory Staff – Mandatory Meeting General Forensic Science Training 1st Floor Classroom 8:30 am – 11:30 am	
	Lab Personnel	**Signature**
48.	Tian, Fu	
49.	Turner, Jennifer	
50.	Vajdos, Scott	
51.	Vircks, Kyle Edward	
52.	Waiters, Kacie	
53.	Walterscheid, Jeffrey	
54.	White, Thomas	
55.	Williams, Donna	
56.	Williams, Sharonda	
57.	Young, Cynthia	
58.	Lyons, Tammy	
59.	Muhlhauser, Carey	
60.	Jesse Zavala	
61.	Kay McClain	
62.	Stevie Wolfe	
63.	Autumn Massiello	
64.	ROBIN FREEMAN	
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69.		
70.		
71.		

Fessessework Guale

Has attended and met the requirements of the on-line course:

Answering the NAS: The Ethics of Leadership and the Leadership of Ethics

On

09/4/2013

This course was provided with funding from National Institute of Justice

This course provided one contact hour

Certificate Number: 1131887473
For further information: www.rti.org/forensiced

Certificate of Completion

This certifies that

FESSESSEWORK GUALE

Has Participated in

"Expert Witness Testimony Workshop"

Presented at the Harris County Institute of Forensic Sciences

November 7 & 8, 2013

Luis A. Sanchez, M.D.
Chief Medical Examiner

CERTIFICATE OF ATTENDANCE

THIS CERTIFIES THAT

Fessessework Guale

has successfully completed the required 1.5 hour

ETHICS WORKSHOP

Given this 20th day of May, 2014

Michal Pierce, M.S.
Quality Director

INSTITUTE OF FORENSIC SCIENCES
HARRIS COUNTY

Roger Kahn, Ph.D.
Crime Laboratory Director

CERTIFICATE of COMPLETION

Is hereby awarded to

DR. FESSESSEWORK GUALE

for completing the

GENERAL KNOWLEDGE OF FORENSIC SCIENCE TRAINING

A 1.0 hour training session was completed on Thursday, April 2, 2015.

Presented by
Quality Management/Training Development

Michal Pierce

Michal L. Pierce, MS, F-ABC
Quality Director
Harris County, Texas

HARRIS COUNTY
INSTITUTE OF FORENSIC SCIENCES
SCIENCE. SERVICE. INTEGRITY.

The Harris County Institute of Forensic Sciences is accredited by the National Association of Medical Examiners, American Society of Crime Laboratory Directors/Laboratory Accreditation Board-*International,* American Board of Forensic Toxicology, Texas Department of Public Safety, Accreditation Council for Graduate Medical Education, and the Texas Medical Association for the Accreditation Council for Continuing Medical Education.

CERTIFICATE OF ATTENDANCE

THIS CERTIFIES THAT

Fessessework Guale

has successfully completed the required 1.5 hour

ETHICS WORKSHOP

Given this 17th day of August, 2015

Michal Pierce, M.S.
Quality Director

INSTITUTE OF FORENSIC SCIENCES
HARRIS COUNTY

Roger Kahn, Ph.D.
Crime Laboratory Director

Corrective and Preventive Actions Report

Printed on: Tuesday, December 27, 2016

Details

Number	Status	Owner	Raised Date
TOX16.03	Closed	Gray, Teresa	8/26/2016

Source	Standard	Target Date
Crime Laboratory\Forensic Toxicology		

Raised By Person	Severity	Raised Against (Department or Supplier)
Samms, Warren	Level I	Crime Laboratory Services\Toxicology

Define Problem

Target Date	Owner	Closed Date	Closed By
	Pierce, Michal	9/8/2016	Pierce, Michal

Details

The Toxicology Analytical Operations Manager (AOM) had difficulty explaining her qualifications on the witness stand during a routine line of questioning resulting in an Assistant District Attorney (ADA) expressing concern over her testimony performance. While reviewing the court testimony with the ADA afterward, it was discovered the AOM was misstating the title of her Master of Science degree.The AOM's behavior on the stand appeared to deviate from two established codes of ethics:-The ASCLD/LAB Guiding Principles of Professional Responsibility for Crime Laboratories and Forensic Sciences requires that a forensic expert "accurately represent their education, training, experience, and area of expertise." -The American Board of Forensic Toxicology expects all certificate holders to follow the ABFT Code of Ethics, among which is the requirement to "Perform all professional activities in Forensic Toxicology with honesty and integrity, and refrain from any knowing misrepresentation of their professional qualifications, knowledge and competence, evidence and results of examinations, or other material facts."

Investigate-Root Cause Analysis

Target Date	Owner	Closed Date	Closed By
	Gray, Teresa	9/29/2016	Pierce, Michal

Details

The Assistant District Attorney was interviewed about the expert witness testimony, as a testimony transcript (which was requested) was not immediately available. Specifically, the employee stated on the stand that she did not receive education or training regarding the effects of alcohol on humans. The employee was then counselled about the feedback obtained, and stated that she interpreted the question as being only within the confines of her formal education, not any subsequent work experience, training, or continuing education. The Chief Toxicologist accompanied the employee to her next court appearances in order to directly observe her testify. Several deficiencies were noted by the Chief Toxicologist. A subsequent review of her credentials revealed that her Master of Science degree was not in "Toxicology", as stated in past court transcripts; rather, it was in "Physiological Science". Furthermore, she stated her degree was in Toxicology on her SOQ, curriculum vitae, and employment application. When the employee was asked about the apparent discrepancy in her testimony about credentials, she stated that she always considered her degree to be "in Toxicology" due to the nature of her coursework and research, despite the fact that her degree and transcript stated otherwise. Accordingly, the root cause was determined to be that the employee felt that the term "Toxicology" better described her course of study, and did not believe that she was misrepresenting her credentials. Further, she failed to recognize the ramifications this discrepancy would have on her professional integrity and within the criminal justice system.

Determine Action

Target Date	Owner	Closed Date	Closed By
	Gray, Teresa	9/29/2016	Gray, Teresa

Details

Re-train the employee to communicate her credentials and professional opinions in the most clear and accurate manner possible while on the witness stand.

Corrective Action

Target Date	Owner	Closed Date	Closed By
	Gray, Teresa	10/10/2016	Gray, Teresa

Details

-A performance improvement plan (attached) was developed to re-train the employee in expert testimony, with an emphasis in clarity of communication.-The discovery about the misstated degree was disclosed to the Harris County District Attorney's Office. A list of potentially affected cases was generated and submitted to the attorneys.-All three accreditation bodies were notified of the nonconformance.

Actions

Number	Owner	Target Date	Completed Date
Details		**Response**	
1	Gray, Teresa	11/30/2016	10/10/2016
Performance Improvement Plan was developed, presented, and signed by the employee on 8/30/16.		Employee resigned on 9/21/16, before completing the P.I.P.	
2	Pierce, Michal	9/6/2016	9/6/2016
The Crime Laboratory Director and Quality Director met with the Belinda Hill, Allison Baimbridge, Terrence Wyndham, and Inger Chandler from the HCDAO on 9/6/16 to discuss the discrepancies noted in the employee's testimony.		The HCDAO issued a notice to the defense bar that same day.	
3	Pierce, Michal	9/9/2016	9/9/2016
The Texas Forensic Science Commission, ASCLD/LAB, and ABFT were notified of the nonconformance via email/electronic submission.		All acknowledged receipt of the disclosure.	

Preventive Action

Target Date	Owner	Closed Date	Closed By
	Pierce, Michal	10/11/2016	Pierce, Michal

Details

-All SOQs and curricula vitae of crime laboratory employees will be reviewed for consistency with their submitted diplomas and academic transcripts. Supporting documentation for claims will be requested, if not already on file with HCIFS.-Honesty about education and qualification in area of expertise is being reiterated in ethics training sessions.-Court transcripts were reviewed by management and incidents of note will be incorporated into future testimony training sessions.

Rev/App By: Manager/Director

Target Date	Owner	Closed Date	Closed By
9/29/2016	Samms, Warren	10/12/2016	Samms, Warren

Details

I acknowledge I have reviewed this summary and approve.

Rev/App By: Crime Lab Director

Target Date	Owner	Closed Date	Closed By
10/10/2016	Kahn, Roger	10/17/2016	Kahn, Roger

Details

I acknowledge I have reviewed this summary and approve.

Rev/App By: Quality Mgr

Target Date	Owner	Closed Date	Closed By
10/11/2016	Young, Cynthia	10/17/2016	Young, Cynthia

Details

I acknowledge I have reviewed this summary and approve.

Closure by Quality Director

Target Date	Owner	Closed Date	Closed By
	Pierce, Michal	10/21/2016	Pierce, Michal

Details

Employee submitted a letter of resignation the week of September 19th, before completing the performance improvement plan. Ethics and testimony training for the rest of staff will continue as planned.

EXHIBIT E

HARRIS COUNTY
INSTITUTE OF FORENSIC SCIENCES
SCIENCE. SERVICE. INTEGRITY.

Luis A. Sanchez, M.D.
Executive Director &
Chief Medical Examiner

Comments on review of testimony given by Fessessework Guale, DVM

May 23, 2017

The Harris County Institute of Forensic Sciences' Chief Toxicologist and senior management reviewed the complaint submitted by Mr. Tyler Flood, on behalf of the Harris County Criminal Defense Lawyer's Association, and six additional transcripts provided by the Harris County District Attorney's Office. In each testimony, Dr. Fessessework Guale testified that she had a Master's degree in toxicology. As the Harris County Institute of Forensic Sciences disclosed to the Harris County District Attorney's Office in September 2016, Dr. Guale's degree is a Master of Science in Physiological Sciences.

In his complaint, Mr. Flood questions Dr. Guale's previous testimony regarding retrograde extrapolation. *Mata vs. State of Texas* holds an expert witness to a high standard when testifying to retrograde extrapolation:

> "The expert's ability to apply the science and explain it with clarity to the court is a paramount consideration. In addition, the expert must demonstrate some understanding of the difficulties associated with a retrograde extrapolation. He must demonstrate an awareness of the subtleties of the science and the risks inherent in any extrapolation. Finally, he must be able to clearly and consistently apply the science."

In general, Dr. Guale communicates poorly, which we addressed in her performance improvement plan. Her testimony was occasionally unclear, contradictory or without sufficient explanation, problems that *Mata* cautions against. Ascertaining whether Dr. Guale possesses sufficient knowledge of forensic toxicology principles and their proper application to testimony is difficult from the reviewed transcripts because her testimony lacks detail and clarifying explanations. The following responses are based on some of the specific example transcripts provided by Mr. Flood in his complaint, as illustrations of the issues involved.

The *State v. Imrecke* transcript excerpt is from a "gatekeeper hearing" that was conducted outside the presence of the jury specifically to address the questions raised by *Mata*. Dr. Guale explained that her extrapolation calculations were performed with the assistance of a software program known as BACTracker. BACTracker performs anterograde and retrograde calculations according to information provided by the user, such as time of first drink, time of last drink, time of interest, tested BAC, height, weight, and gender. BACTracker, like any calculator, will perform calculations independent of context; the user must determine whether the entered variables and calculated results are appropriate. In this hearing, Dr. Guale was asked repeatedly how certain parameters (i.e. time of first drink, time of last drink, time of blood draw, time of incident, presence of food, etc.) impact the BAC calculation. Dr. Guale's responses clearly demonstrated that she relied on the software for calculation, and she was unable to convince the court that she appropriately understood the underlying ethanol pharmacokinetics upon which the software is based. On each occasion, she described how each parameter would affect the BACTracker program and how the absence of a parameter would default BACTracker to an "average" for the calculation. The judge characterized Dr. Guale's role as data entry.

Mr. Flood specifically questions Dr. Guale's testimony on retrograde extrapolations when an individual could still be absorbing alcohol. The challenge for any toxicology expert is to know that the individual is in the post-absorptive phase. Absorption is a multi-variate process, influenced by the amount and kind

of food eaten, smoking, the type of drink consumed, and gender, among others, and may last as little as 15 minutes or may extend beyond two hours. The absorption rate of a particular individual at a particular time is unknown as many of the critical variables are unknown or unknowable; therefore, the expert must assume absorption is complete to perform retrograde extrapolation or "subtract off" potentially unabsorbed alcohol. Different experts use different time "thresholds" between the time of last drink and the incident to assume complete absorption. Some experts use a 60-minute absorption window, as most individuals have completed absorption in an hour; others may use a more conservative two-hour window. Irrespective of the time threshold used, it is imperative that the expert acknowledges and clearly explains the assumptions made in their calculations, as required by *Mata.*

In the Imrecke transcript, Dr. Guale provides unclear and often contradictory testimony regarding extrapolation while still absorbing. Initially, the prosecutor presents a hypothetical in which 1 hour 41 minutes elapses between last drink and time of stop. Dr. Guale testifies to an extrapolated concentration using a pre-prepared BACTracker report without clearly stating she was assuming the defendant was in the elimination phase (Page 19). On Page 43, she disputes Mr. Flood's assertion that absorption lasting for two hours or more is reported in the scientific literature ("It's my experience that two hours – I haven't seen, even with the slowest absorption, the maximum I saw is one and a half hours.") This contradicts her testimony from the year prior in *State v. White* that absorption can take up to 2 hours. Dr. Guale then reverses her position in the Imrecke hearing when Mr. Flood offers to show her literature, ultimately agreeing that absorption can take up to two hours and later testifying on multiple occasions in the Imrecke hearing that the maximum is two hours. Mr. Flood asks her, "And generally, it's not common practice for any lab professional or colleagues to attempt to extrapolate back into the absorption phase." She responds, "Correct." (Page 47). On further questioning, she says that extrapolation into the absorption phase "…just increases the range; that's all it does really." The court asks whether she can do extrapolation into the absorption phase, Dr. Guale does not directly answer the court's question and instead answers about anterograde extrapolation (page 128). The court then provides a hypothetical using less than 2 hours for absorption and Dr. Guale says that she "can subtract 0.024 which is the total concentration of alcohol you can obtain from having a two hour absorption." It is not clear how Dr. Guale calculated this 0.024 concentration. It is possible that she was attempting to "subtract off" unabsorbed alcohol, but she does not explain her thought process. On re-cross, Mr. Flood asks, "You testified several times that you cannot extrapolate and give a number if a person is in the absorption phase?" Dr. Guale responds, "You can give a range. You cannot extrapolate," which is contradictory. She further testifies that the drinking pattern before the stop does not matter, which is incorrect, as the time of last drink is crucial for estimating absorptive state and calculating possibly unabsorbed alcohol, if she were "subtracting off" drinks proximate to the stop. By pages 53 to 55, it appears everybody was confused as to what the other party was saying, and the assumptions being made. With the confusion, it is difficult to differentiate whether Dr. Guale's deficiency is her knowledge or her ability to communicate. Ultimately, the court grants the defense motion to suppress extrapolation testimony.

Dr. Guale provides similar testimony in another case (*State v. Rusbel Gonzalez*). The prosecutor provides a hypothetical for extrapolation. Dr. Guale performs the extrapolation, this time stating she was assuming elimination. On cross, she concedes that the defendant may be absorbing as approximately 1.5 hours elapsed from the time of last drink to stop; thus, she could only give a range for BAC (a range was not provided on direct). On re-direct, she explains that if the defendant was still absorbing she could subtract off 0.02 "which you can possibly absorb within that 30 minutes and subtract it" from the BAC. It is not clear how Dr. Guale arrived at 0.02 g/100 mL absorption within an hour. However, from both of these

courtroom examples it is clear that Dr. Guale believed that extrapolation in the absorption phase could be calculated, but the result would be provided as a range.

In his complaint, Mr. Flood also raises concerns about "chromatograms that do not match the labs calibration curve in blood ethanol cases. Dr. Guale was unable to provide an explanation as to [why] the results in the chromatograms provided to defense counsel do not match the values on the calibration curve for the batch run for the sponsored BAC result." There are actually two issues here – 1) how the blood alcohol macro used by HCIFS updates the calibration curve with calibrators analyzed on the day of analysis and 2) how concentrations are displayed on the chromatogram versus on the calibration curve report.

For issue 1, the macro used by HCIFS automatically updates the calibration model after individual calibrators are analyzed, rather than updating after all six calibrators are finished running. For example, if we were re-calibrating today, the results from today's calibrator 1 would replace yesterday's calibrator 1; the calibration would be saved with today's calibrator 1 and yesterday's calibrators 2-6; and a chromatogram would print with a concentration calculated from the discontinuous calibration curve (identified as "raw data" in the Imrecke transcript). Then, results from today's calibrator 2 would replace yesterday's calibrator 2; the calibration would be saved with today's calibrators 1 and 2 and yesterday's calibrators 3-6, and the "raw data" would print. This process would repeat for all six calibrators. After the calibration curve is updated completely, chromatograms for today's six calibrators would be printed with concentrations calculated from the complete, updated calibration model; these correct concentrations are used to assess the accuracy of the calibration model. In the Imrecke trial, Kimberly Peterson, former HCIFS Toxicologist III, provided accurate testimony on calibration, not Dr. Guale.

The second issue relates to how concentrations are rounded or truncated to the third decimal place by the instrument software. For chromatograms, concentrations are truncated to three decimal places, but on the calibration curve report, the concentrations are rounded. The rounding vs. truncated difference causes the concentrations to be different in the last decimal place on occasion. Ultimately, the issue is moot, as the concentration printed on the calibration curve report is not used to assess curve acceptability; only the chromatogram concentration is used. In the De La Cruz trial, Dr. Guale is asked about the difference, which she attributes to issue 1 described above. Dr. Guale thought defense counsel was hiding documents from her, which supported issue 1 and never attributes the difference to issue 2.

The testimony provided in these transcripts do not appear to meet the standards expected of an expert witness. Dr. Guale testified on relatively few occasions – 19 times from December 2011 to November 2015, as another toxicologist provided the majority of interpretative testimony. After November 2015, Dr. Guale testified more frequently as she was the highest-ranking member of the Forensic Toxicology Laboratory (14 cases from November 2015-August 2016). Current HCIFS management had no knowledge of Dr. Guale's difficulties communicating in court until late 2015; from 2010 until then, Dr. Guale's testimony evaluations were rated acceptable or higher. Feedback was sought both from the prosecuting and defense attorneys she encountered. Even in late 2015, the substance of Dr. Guale's testimony was not questioned, just her ability to articulate. Questions about the substance of Dr. Guale's testimony arose in mid-2016. By that time, a higher-ranking, qualified toxicologist was hired as Chief Toxicologist, and that individual was able to evaluate Dr. Guale's toxicology knowledge. During direct observation of Dr. Guale's testimony, the Chief Toxicologist noted similar issues to those found in the reviewed transcripts. Dr. Guale was placed on a performance improvement plan to address her deficiency.

Concurrently, the inconsistency in her degree was discovered, and Dr. Guale resigned before she could complete the performance improvement plan.

In her role as Analytical Operations Manager, Dr. Guale trained other analysts in alcohol interpretation and testimony. The Chief Toxicologist evaluated these analysts independently in July 2016 before Dr. Guale's testimony ability was questioned; in the Chief Toxicologist's opinion, these analysts understood and were able to explain sufficiently alcohol pharmacology.

As in the past, feedback regarding trial testimony will be actively sought from defense counsel, judges and prosecutors. Feedback will be collected and reviewed by an independent employee in the Quality Management Division so that any questions of competency may be addressed immediately as they are brought to our attention. Moving forward, several additional measures have been implemented to address inadequate testimony. First, all testifying personnel, including the technical managers, must be evaluated annually by a competent expert in the discipline. If the technical manager is the highest-ranking qualified member of the discipline, an external expert will be sought for testimony review. Concerns will be addressed promptly with regularly scheduled follow-up. Second, trainees must pass a mock trial before qualification and authorization to commence casework in a new category of testing when there is a reasonable expectation of testimony. Third, in the event there is a change in technical management, the new technical leader must review the credentials, qualifications, and competency of each analyst in that particular discipline. The review must be documented and may include new mock trials or direct observation in court for those analysts that testify.

EXHIBIT F

HARRIS COUNTY
INSTITUTE OF FORENSIC SCIENCES
SCIENCE. SERVICE. INTEGRITY.

Luis A. Sanchez, M.D.
Executive Director &
Chief Medical Examiner

Comments on additional review of testimony given by Fessessework Guale, DVM

July 12, 2017

The Harris County Institute of Forensic Sciences (HCIFS) received 32 transcripts from the Harris County District Attorney's Office (HCDAO) in June 2017. Case information for each, including the blood alcohol concentration, is listed in the table below. Ten of these transcripts (*Dailing, de la Cruz, Gaddis, Gonzalez, Hitt, Hull, Imrecke, Sitawisha, White* and *Williams*) were previously provided by the HCDAO or Harris County Criminal Defense Lawyer's Association and reviewed (see HCIFS response to the TFSC dated 5/23/2017); therefore, no new action was taken on these transcripts. The HCIFS chief toxicologist and senior management reviewed the remaining 22 transcripts.

Consistent with previously reviewed testimony, Dr. Fessessework Guale testified that she had a Master's degree in toxicology, which we have confirmed to be a Master's degree in Physiological Sciences from Oklahoma State University. Additionally, in *Allen*, *Arnold* and *Cisneros*, she is inconsistent regarding a degree in animal science, identified as a "bachelor's degree," "first degree" or just a "degree" without qualification.

Dr. Guale testified about ethanol in a majority of the newly reviewed transcripts. Consistent with previously reviewed testimony, she provides unclear and contradictory testimony regarding extrapolation and absorptive state. For example, in *Lengua* and *Sechrist,* she describes the time of first and last drink as the "most important" or "most crucial" variables for extrapolation, but in *Arnold, Lengua, Ronald Rodriguez* and *Ulloa*, she says such information is not necessary. Despite defense challenge on her opinion, as in *Ronald Rodriguez*, Dr. Guale maintains that time of last drink is not important because she knows the blood result (0.16g/100mL):

> **Defense counsel:** "Okay. Now, without that specific information, like – the things like when he had the first drink, when he had the last drink, when exactly he ate that day, things like that, you can't specifically say he was above a 0.08 at the time of driving, right?"
> **Dr. Guale:** "It doesn't matter. As a matter of fact, when he started drink and when he stopped drinking - "
> **Defense counsel:** "Ma'am, hold on. Let me finish"
> **Dr. Guale:** "-does not matter for the calculation."
> **Defense counsel:** "It doesn't matter."
> **Dr. Guale:** "It doesn't matter."

In at least five cases (*Cisneros, Lenguea, K. Nguyen, Richardson,* and *Ronald Rodriguez*), she provides extrapolation testimony without having any information about the drinking history.

In various testimonies, Dr. Guale voluntarily testifies to or agrees with an attorney's representation of inaccurate information. Again, it is difficult to determine whether these are attributable to her imprecise communication or an actual lack of knowledge, as some issues are addressed only one time. Examples include:

- In *Cisneros,* agreeing that elimination is when we "go to the bathroom and throw up."
- In *Flores*, agreeing that cocaine route of administration dictates whether an individual experiences euphoria or dysphoria.

- In *Johnson-Cervera* and *Ronald Rodriguez*, testifying that side effects for alprazolam and tramadol, respectively, are present only when the drug is not used as prescribed.

With the exception of the specific inaccuracies described above, the new transcripts are consistent with the concerns described in our May 23, 2017 response. Dr. Guale struggles to articulate her opinion and the scientific principles she used to formulate her opinion.

Case Information on Additional Testimonies Reviewed						
Count	**Last Name**	**First Name**	**Cause #**	**Case #**	**BAC (g/100mL)***	**Year of Testimony**
1	Allen	Gary	10-DCR-054820	ML2010-1351	0.19	2012
2	Arnold	Michele	1271759	J10-06188	0.19	2013
3	Belcik	Meredith	1985568	IFS14-12454	0.223±0.018	2015
4	Blackwood	Jennifer	1433419	Non-IFS	0.21	2016
5	Cisneros	Rodolfo	1934514	IFS13-13325	0.16±0.013	2014
6	Cozart	Lucas	1642313	J09-09853	N/A (drugs only)	2011
7	Dailing	Amanda	2025753	IFS15-07504	0.184±0.015	2016
8	Delacruz	Jose	2024734	IFS15-08648	0.109±0.009	2016
9	Flores	Jaime	1459301	IFS13-11740	0.1	2016
10	Gaddis	Edwin	1996292	IFS14-15391	N/A (drugs only)	2016
11	Gonzales	Rusbel	2075665	IFS16-02572	0.149±0.012	2016
12	Hitt	Lanis	1973657	IFS14-09330	N/A (drugs only)	2015
13	Hull	Leonard	1317022	J09-01514	0.19	2012
14	Imrecke	Daniel	1999133	IFS14-16245	0.136±0.011	2016
15	Johnson-Cervera	Errick	2047197	IFS15-17194	N/A (drugs only)	2016
16	Juanopulous	Alex John	1980687	IFS14-11329	0.095±0.008	2015
17	Lengua	Carlos	1302347	IFS11-03041	0.12	2012
18	Nguyen	Kim Chi	1979172	IFS14-10570	0.181±0.014	2015
19	Nguyen	Luc	1989534	IFS14-13486	0.144±0.012	2015
20	Pineda	Carlos	1971540	IFS14-08462	0.191±0.015	2015
21	Ramer	Renea	2027310	IFS15-07917	0.178±0.014	2016
22	Reynosa	Quincey	1472480	IFS15-09398	0.196±0.016	2016
23	Richardson	Akil	1965632	IFS14-06839	0.156±0.013	2015
24	Rodriguez	Ronald	1834521	IFS12-06340	0.16	2013
25	Rodriguez	Roy	2017073	IFS15-05103	0.13±0.011	2015
26	Sechrist	Matt	1998977	IFS14-16996	0.24±0.016	2015
27	Sitawisha	Nomathemba	1870305	IFS12-13209	0.21	2014
28	Ulloa	William	1489724	IFS15-16358	0.157±0.013	2016
29	Vu	Phuy Thanh	1932115	IFS13-12745	0.091±0.008	2015
30	White	Warren	1937165	IFS13-13855	0.145±0.012	2015
31	Wiggins	Gina	2018-58026	J10-07375	0.21	2012
32	Williams	Troy	1248664	ML2007-4218	0.1	2012

*When uncertainty of measurement was reported, it was expressed using a 99.73% level of confidence.