(Jury enters courtroom)

THE COURT: State, call your next witness.

MS. LITTLE: Your Honor, the State calls Andre Salazar.

THE COURT: Can I get you to raise your right hand?

(Oath administered to the witness)

THE COURT: Please have a seat. Pull the mic up to you, speak clearly.

And, State, you may begin.

MS. LITTLE: Thank you, Your Honor.

ANDRE SALAZAR,

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MS. LITTLE:

Q. Mr. Salazar, can you please introduce yourself to the jury?

A. My name is Andre Salazar, and I'm a forensic toxicologist with the Harris County Institute of Forensic Sciences.

Q. What is a forensic toxicologist?

A. Forensic toxicologist is a scientist whose primary responsibility is to identify and measure drugs -- such as alcohol or other drugs or toxins, poisons, chemical compounds -- in an individual.

In my laboratory, this can happen, whether they're still alive, for proceedings such as this, or in postmortem cases where the person has already died and it's become our responsibility -- it falls into our jurisdiction -- to investigate the death.

Q. How long have you been with the Harris County Institute of Forensic Sciences?

A. A little over seven years.

Q. What is your educational background?

A. I hold a Bachelors of Science in Biomedical Science from Texas A&M University; and other than that, I also have extensive training, not only in forensic toxicology but also veterinary toxicology, which is where I initially started after college.

Q. Where were you before the -- you started working at the Institute of Forensic Science?

A. I was with the Texas Veterinary Medical Diagnostic Laboratory. This is in College Station, Texas. With some minor differences here and there, it was essentially the same type of testing, only in racing animals -- which is horses, the greyhounds, livestock shows -- and also select animal cruelty cases, things of that nature.

Q. Do you or have you participated in any professional teachings or trainings?

A. Yes, I have. I have given at least two presentations to professional organizations, such as Southwestern Association of Toxicologists; AFS, it's American Association of Forensic Sciences, in headspace technology, particularly in blood alcohol testing, and also for other various drugs and things like carbon monoxide poisoning, cyanide poisoning.

Q. And the headspace technology that you're talking about, that is what you utilize to determine blood alcohol concentration, correct?

A. That's correct.

Q. Do you have any memberships with any scientific communities?

A. Yes, I'm a member of the Southwestern Association of Toxicologists. We also call it SAT.

Q. And what does that mean?

A. When you hold a -- when you're a member of a professional organization, you do have to come recommended; you do have to have people who sponsor you and that know you; and it becomes a question of integrity, the kind of quality of work that you do, and also how long you've been in the field. So you do have to have people that sponsor you, where the organization then rules and evaluates your application and then decides to induct you as a member.

From there, you're part of a community. You share opportunities and presentations, original research, maybe trends in the field that you're in.

Q. What specific training do you have in regards to gas chromatography headspace?

A. The training I received was in blood alcohol. Our office has its own in-house training program, as most forensic laboratories do. It's fairly extensive. I came in under the supervision of a more senior toxicologist, someone who had been there about as long as I've been there now. She was responsible for all my work. I was not allowed to do case work, period. She had me run various things, and she had to sign off on it. So she was responsible not only for her work but for my own.

One of the requirements is that the new analyst in training has to pass what we call "proficiency samples." Excuse me.

THE COURT: Slow down a little bit. Okay?

THE WITNESS: Okay. Yes, Your Honor. I apologize.

THE COURT: That's all right. Just remember: That little one in front of you is having to take down everything you say.

THE WITNESS: Okay.

A. Proficiency samples, which are essentially coming from a different organization, and they take these compounds and spike them at different amounts into these samples, or none at all. They send it to us, and the trainee has to test it using the correct protocol. Your results then go back to that agency and they fail you or they pass you.

So you have to complete that successfully to demonstrate that you're competent in the science, the process, the analysis. You understand the theory and the instrumentation. Otherwise, you cannot achieve a pass result without that knowledge.

Also, I had to take a written exam; and I had to demonstrate proficiency with a test that was graded with an adequate -- with an acceptable score.

After all this, my training was compiled and the chief toxicologist had to review it and, finally, my supervise at the time, the senior toxicologist, had to also give her evaluation of my performance, whether or not she felt like I grasped the principles, the science, the process to do this as an analyst and sign off on my own cases, which she did.

This whole process took almost a year, approximately seven to eight months. So then I was allowed to do case work on my own.

Q. (By Ms. Little) Have you testified as an expert in this area before?

A. Yes, I have.

Q. On few or many occasions?

A. Many.

Q. Let's talk about the actual method that's used for testing blood alcohol concentration.

A. Okay.

Q. What is the scientific method called?

A. The scientific method that this test is based on, it's called Henry's Law. Everyone here, I'm sure, has boiled water at home. When you're boiling water, you're heating it up to a certain temperature, where it's boiling. What comes off of the water becomes steam.

Essentially, what I'm doing is I'm taking a blood sample, I'm heating it up to a certain temperature that alcohol will become a vapor. So just like boiling water, I'm really only putting a lid on the pot because I want to capture that vapor so that I can use a needle to take out a certain amount of that vapor, the ethanol vapor, and inject it into my instrument, identify it, and measure it.

Q. So you are essentially -- you're not testing the blood itself, correct?

A. No. Just the vapor.
Q. You're testing the vapor that comes off of the blood?
A. And the term headspace gas chromatography, headspace or GC headspace, is the -- in the vial itself, you'll have blood here, or whatever sample you're testing; and then there is just a gap above that sample, which the needle samples from. That's called the headspace. So that's where that terminology comes from.
Q. Why do you test the headspace and not the actual blood itself?
A. The columns that we use, it's a -- it's a piece of equipment inside the instrument that actually takes the sample and separates all the compounds that are inside the blood -- okay -- which there's a lot of it. These columns are designed to only interact -- they only like the alcohol class. We're talking about methanol, which is wood alcohol that they used to make during prohibition, you know, thinking it was alcohol; ethanol, which is drinking alcohol; acetone, which you can find in nail polish remover but our bodies do produce it in certain amounts; and isopropanol, which is rubbing alcohol. So that column -- I'm sorry, could you restate the question?
Q. Why do we test the headspace --

A. Oh, okay.
Q. -- and not the blood itself?
A. So these columns are designed in this fashion to only interact with these compounds. They're also designed to interact with the gas. If I were to put any kind of liquid on these columns, it would damage the column.
Q. Okay. And in cases like this, you're specifically looking for ethanol, correct?
A. Correct. Three other -- we're also looking for three other things, but primarily ethanol.
Q. Okay. And those are other three are the three that you just spoke about?
A. Correct.
Q. Acetone, methanol, and isopropanol?
A. Yes.
Q. Correct? Which are not drinking alcohol, correct?
A. Correct.
Q. Okay. And I just want to take this step by step so that we don't get going too fast.
When you get a -- when you're about to test a batch of blood results, what do you do? How do you get the blood?
A. How we receive the blood, a representative from

the submitting agency -- doesn't matter, law enforcement or whoever -- will come to our laboratory and drop off the evidence to a section that we call evidence section. That's all they deal with is just receiving evidence. They have their own SOP -- standard operating procedure, is the acronym -- for receiving this evidence; so once it meets standard operating procedure requirements, they then transfer that information -- based on what the submitting agency gives them, an offense report or other information -- into our database.

Everybody, I'm sure knows what a database is. It's just an electronic filing cabinet for large amounts of information so it can be looked up at any moment.

So the evidence is put in there under an IFS designation. IFS ties this information to the information that's in our database: What our results are, what was tested, when was the evidence received, information like that. So the two can be looked at together.

From there, the evidence section would then bring the evidence directly to my section, toxicology; transfer it to a secure refrigerator where it's then taken out and it's accessioned. Now, the process of accessioning, we need to know what are the

contents, what is the evidence, we need to take photographs of it, everything that comes with it -- papers, tubes, syringe needles, everything that was given to us -- to show how the evidence was received by us.

Once that's completed, an analyst will take -- not necessarily myself but another analyst trained in accessioning will then take the evidence; open it up; and document the volume, if it's a liquid; the weight, if it's a solid; its characteristics how does it look -- which the photos also do -- initials; date; times; et cetera.

Once that's done, the evidence is then assigned specific testing: Do we want to test alcohol, do we want to do drug testing, et cetera.

Q. Okay.

A. And then it's put away into secure storage until it's ready to be tested.

Q. Okay. And I'm going to show you what's been marked State's Exhibit 8.

(State's Exhibit No. 8 published)

Q. (By Ms. Little) Is this one of the photographs that you were talking about?

A. That's correct.

Q. Okay. And on this particular photograph, we

have a report number, which is the police report, correct?

A. Correct.

Q. And then down here is the IFS number that you were talking about, correct?

A. Correct.

Q. And the IFS number will match the incident report number.

A. Yes. They can be cross-referenced.

Q. Okay. And when you receive something in the lab, you get this bag; and y'all put these stickers on, correct?

A. Correct. Actually, these stickers here come to us already on them. We only supply this sticker.

Q. Okay.

A. And then once we open up the evidence, if there's -- whatever evidence -- blood, whatever -- we put our own evidence stickers on those as well.

Q. Okay.

A. So just the outside container already has an evidence label.

(State's Exhibit No. 9 published)

Q. (By Ms. Little) And then I'm showing you what's been marked as State's Exhibit 9. Is this another one of --

(Cell phone ringing)

THE COURT: Turn it off.

Q. (By Ms. Little) -- another one of your evidence stickers?

A. Yes, it is.

Q. And what is this blue tape, and what is the significance of it?

A. This is what's called security tape. Anytime evidence needs to be sealed, this kind of tape is used not only in our laboratory but in law enforcement agencies, also. Anything that you want to show that you -- the container was either opened or you opened it, you would reseal it with this tape --

(Cell phone ringing)

A. -- and for our purposes, standard operation procedure, we initial --

THE COURT: Okay. Hold on.

A. -- and date -- the person who opened it and resealed it has to initial and date it.

THE COURT: Okay. Hold on a second.

Make sure it's turned off.

A JUROR: It is.

THE COURT: Okay. All right. You may continue.

Q. (By Ms. Little) Okay. So when you receive --

when y'all receive -- it's going to have the red evidence tape on, correct, from the police department?

A. Correct.

Q. And then you add this blue tape after you open up the evidence bag to test the blood?

A. Correct.

Q. Are these your initials or the individual who tested the blood for you? Or pardon me, prepared the bag for you?

A. These are not my initials. It's not my handwriting. This has to come from the submitting agency, the submitting representative.

Q. The red?

A. Yes, these right here (indicating).

Q. Okay. So you're saying that would've been the officer's initials?

A. Yes. My initials would be on this side or the other side of the blue tape --

Q. Okay.

A. -- in that area. But there are many of us who open these bags up and do our analysis. So there's multiple ones.

(State's Exhibit No. 7 published)

Q. (By Ms. Little) Okay. And I'm showing you now what's been marked as State's Exhibit 7. And, again,

this is one of -- this is the tag that y'all put on once it comes --

A. Correct.

Q. -- to your department to identify the brood, correct?

A. Yeah, I'd like to make a distinction. This number, all this right here (indicating), the labels that go on the actual blood tube will not look -- will not always look the same. But for photographic evidence, you have to be able to show what evidence you're looking at. So the label that's in here is purely for that purpose.

(State's Exhibit No. 11 published)

Q. (By Ms. Little) Okay. And then, finally, this is just the backside of the blood tube, but again you put the tag there so that we know what piece of evidence we're looking at, correct?

A. Correct.

Q. Okay. So, the blood is now ready to be tested.

A. Correct.

Q. What do you do?

A. What I do is, going back to our database -- which are called justice tracks, by the way -- I would take these samples out; and bear in mind that I don't test one sample at a time. One day, I'm going to run

this sample; another day, I'm going to run another sample. We batch them. So my runs will have anywhere from 20 to 60 blood tubes. Okay? We're talking about both living people and people who are deceased. So we just pull them all together as a work flow, efficiency solution.

Q. How do you keep from getting the blood samples confused?

A. We have three checkpoints in our standard operating procedure. Okay? One of them has to do with ensuring that the list that the database produces -- telling me the number of all the cases that need to be run that are pending alcohol analysis and the order that they're in, they're printed -- someone else who is not me -- I have a second pair of eyes come; and they check every single individual blood tube to ensure, A, it's the correct blood tube, the correct evidence piece, and, B, it's in the correct order. So am I sampling it, will I be testing it in the correct order?

From there, I use our database because everything is done electronically in our laboratory. It's all tracked electronically. I have a unique barcode very similar to this, but it requires a pin number that only I know. The database recognizes my barcode and my pin, together identify me as taking this

evidence or these two pieces of evidence into my possession, the date and the time.

I take it up to my work space where the alcohol instruments are located, and I proceed with the analysis. The analysis consists of taking a very small amount of blood -- okay -- for these kind of tests, for DWI's or DUI's. It equates to about two drops from a Visine bottle, roughly, if you want to think about it like that.

It goes into a specialized vial. Okay? I add what's called "internal standard" into it, which is required for analysis. You need that to determine a blood alcohol number, the amount that's in a person's blood.

I cap it with a metal cap and I crimp it down to create an airtight environment in there and now the sample is ready to be tested.

Q. And when you take -- take a sample -- so you said it's about two drops -- you take it from one or both test tubes?

A. Well, standard operating procedure and, really, it's just a basic fundamental of forensic testing in general, if you have enough pieces of evidence you want to screen -- okay -- we don't care about the number at that point. We just want to know: Is there ethanol

there, or is there no ethanol?

If there's no ethanol, it's negative. If there is, the screen is positive, we need to confirm it. And it's confirmed on a different day, after totally recalibrating the instrument; aliquot new quality controls, QC's; and then we will test the other piece of evidence. Oftentimes, this is done by more than one analyst. I could do one piece of evidence; the other analyst will do the other. Sometimes, I do both.

But that safeguard is in place to make sure that if there is ethanol found in one piece of evidence, that it wasn't a fluke, that it wasn't by chance, by accident, by error; and the two numbers should match very closely.

Q. So when you do a run, do you have two samples in that run or only one sample of the blood?

A. Only one.

Q. And then you'll do a second run with another sample?

A. With another sample on a completely different day.

Q. Okay. To confirm that you're getting the same results?

A. Well, not only is there ethanol in there but that the quantity of ethanol is very close to the

original screen.

Q. Okay. So, we have our droplets of blood; and you put them in the small metal containers. What happens next?

A. Well, after they're put in the vials, they're taken over to the instrument -- I'm sorry, I wish there a way I could equate the size. From the top of this easel to the first brackets is roughly how big it is. It's not very big.

So these are loaded in sequence -- okay -- according to the list. What vial goes into this position. Okay? Another analyst will come behind me and do what's called a pre-sequence check. Before I even hit the go button, essentially, they will go through and look at my list and make sure every single vial is labeled correctly, is at the right case that's being tested, is it in the correct position. Okay? Exactly how it was done previously with the blood tubes.

Then I hit start. It's a little bit more complicated than that; but, really, it's just hitting start. And then the machine is fully automated. At that point I can walk away from it because the instruments are in a secure facility on a secure floor in a secure room. I don't have my badge with me but the only way that you can get inside the room is with an

RFID tag and you have to be authorized to be in that room. Only five people, six people, to my knowledge, have access to that room. And toxicology is a large department.

Q. And you also said that the instrument is calibrated beforehand, correct?

A. Yes.

Q. And what does that mean?

A. Calibration, if you are -- say your business is making scales for doctors' offices or hospitals, you want your scale to be accurate, to give people's weight correct. So if you make these scales, you would have to do some sort of quality control on them before you sell these products. So you would test your scale with different size weights, you know; and that's what you're doing. These weights would be a good quality, come from a good company. They're certified to weigh 5 pounds, 10 pounds, 50 pounds, a hundred pounds. You're calibrating your scale.

It's no different -- I mean, the analogies don't really cross over that well; but, essentially, with a calibration curve, I'm using different strengths of drinking alcohol, ethanol -- 0.02 percent, 0.05, 0.10, all the way up to 0.40 -- six data points to produce this line that's straight.

This is what's called linear regression. It's not a curve, but that is the scientific term that is used commonly -- calibration curve to show that your instrument can measure ethanol at a very low range to the very high range that you have set. Our requirements is that the R-squared value -- it's what we use to determine how well the instrument is calibrated, how good is this curve, how straight is this line, and how well do these data points touch that line -- it has to be 0.99 or better. 0.99, if you think of 99 percent, it's 99 percent accurate, with 1 being perfect. Okay?

And also to test this calibration, we run what's called quality controls, QC's. QC's are designed to be ethanol at a very low volume, ethanol at a very high volume. If your QC's pass within the predetermined range -- okay -- your calibration is good. It's accurate at the low end, at some point in the low end, and on some point in the high end. So there is continuity. So you can feel confident whatever unknown sample you're testing is going to be accurate.

Q. Okay. And just to simplify this: You're basically taking numbers -- you already know what the results should be?

THE DEFENDANT: Observation, Your Honor, he could not know what the results should be.

MS. LITTLE: Your Honor, we're talking about a calibration, not about her results.

THE COURT: Right. Okay. Overruled.

Q. (By Ms. Little) You already know what the result should be; you're running those samples through the instrument to confirm that they are coming out as what they should be?

A. That's correct.

Q. Okay. And in this case, you calibrated the instrument beforehand?

A. Yes.

Q. And everything was done appropriately?

A. Yes, calibration is done daily. It's not once a month or once a week. It's every time you use the instrument.

Q. Okay. So you always calibrate the instrument before you do a run --

A. That's correct.

Q. -- to confirm that the instrument is working properly?

A. Correct.

Q. Okay. So we have the instrument calibrated; we are putting our samples, unknowns, into the instrument to run them; you've pressed start; and you've walked away. What happens while that instrument is running?

A. What happens is going back to how I explained to you how it's -- you know, essentially, we're trapping the vapor so we can test it. We have a very specialized needle that it's in this instrument that samples the gas after it's been heated. You can't draw blood with this needle. It can only be used for gas analysis. It will draw a certain volume of this gas once the sample's been heated and then inject it directly into the instrument to be measured.

While this happens, as I said earlier, we have columns that take all this amount of compounds that are in this vapor to separate them out. Okay? These columns are designed to only like the alcohol class, which is these four compounds -- including our internal standard, so five. That's what's called selectivity. It's highly selective. It doesn't care about things like cocaine or canned air, things like that. It only cares about these four or five things, compounds.

As it goes through the column, it's under pressure from another gas; so it's being pushed through this column. And as it separates out, the columns will start interacting with these alcohol compounds that may or may not be in the blood. Okay? As it does that, depending on what it is, it will either speed up, slow down. So what you get (demonstrating) is what's called

concentration banding. Ethanol is going to kind of run at the same speed as the other ethanols. Okay? They're going to catch up with each other, they're going to group together, and they're going to move together through the column. Same thing with the other three compounds. And this would be the flow of the gas through the column, and they will stay that way until they reach the end of the detector.

Q. Okay. So we have -- the vials are heated, correct?

A. Correct.

Q. And once they're heated, that's when we have this steam that you talked about?

A. Yeah --

Q. We're calling --

A. We're calling --

Q. -- it steam, correct?

A. -- it steam. It's a vapor.

Q. It's the vapor, correct?

A. Correct.

Q. And that is what the needle tests?

A. Yes.

Q. As these compounds move through the columns, they'll group together. So we have ethanol, correct?

A. Right.

Q. And we have acetone, correct?
A. Yes.
Q. And methanol?
A. Yes.
Q. And isopropanol?
A. You can call it rubbing alcohol, that's fine.
Q. Rubbing alcohol, perfect. So we're going to have four separate columns.
A. Well, four separate anolytes through the columns, yes.
Q. Yes. And then we have our detection and results after that, correct?
A. Correct.
Q. Can you explain that to the jury?
A. Yes. Sorry about the picture. What you will see -- and I apologize if the picture is distracting you, but you will see this.
(State's Exhibit No. 11 removed)
A. Thank you very much.
Something similar to this (demonstrating). Okay? At the end of the column, it goes through what's called the flame ionization detection. Okay? This detector basically vaporizes the sample that's already in vapor form, just completely -- just completely burns it up so that as it's -- think of this right here, what

we call the baseline. When nothing is going through the detector, it's going to be flat. But once the detector goes, Okay, there's something here, there's something here, oh, it's already gone. Okay? This is how much, and this is time. Sorry about the handwriting here. So the -- this part right here will tell me how much, how big this peak is, how much of this compound just came off. Down here, it's going to tell me when it came off. Okay? And it will do this for all these compounds.

Now, like I said before, depending on what it is -- okay -- will determine how it -- the order that it comes off. These columns are sold by different manufacturers, who all make them, you know, roughly the same way -- of course, it's proprietary, they won't tell you -- but it always comes off very similar to this.

Methanol will always come off first; followed by ethanol; depending on the column -- you know, the kind of column you purchase, acetone or isopropanol will be the ones to come off next; followed by your internal standard. This doesn't change. I could run my quality control samples that have all these compounds in them already, and they will never come off any differently. That's why it makes it such an excellent reference from when I use an unknown standard, so imagine I have my results that show me what time each

of these came off of. And all I have is an unknown peak here at this time and my internal standard, which I should have in every sample anyway. Okay? What is this peak? I match the time with the reference standard. Okay, that's ethanol. Okay, that's methanol. That's essentially how the process works. And like we said earlier, it is not done once; it's done twice.

Q. (By Ms. Little) Is gas chromatography headspace accepted in the scientific community?

A. Yes, it is.

Q. Is it the most commonly used method to -- in forensic laboratories?

A. Yes, it is.

Q. Is it the most commonly used method to test for alcohol -- blood alcohol?

A. Yes, it is.

Q. You analyzed the defendant, Nomathemba Sitawisha's blood in this case, correct?

A. Correct.

Q. Did you use the exact same process that you just explained to the jury?

A. Yes, I did.

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

THE COURT: You may.

Q. (By Ms. Little) I'm showing you what's been marked as State's Exhibit 12. What is this?
A. This is a toxicology laboratory report from the Harris County Institute of Forensic Sciences.
Q. Okay. And is that your name there as the analyst?
A. Yes, it is.
Q. And what was analyzed in this case?
A. According to the report, ethanol, acetone, methanol, and isopropanol were all analyzed.
Q. Okay. And is that the defendant -- defendant's name at the top, Nomathemba Sitawisha?
A. Yes, it is.
MS. LITTLE: Tendering to the defendant.
THE DEFENDANT: No objection.
THE COURT: State's Exhibit No. 12 will be entered into evidence without objection.
You may publish.
MS. LITTLE: Thank you, Your Honor.
Q. (By Ms. Little) Mr. Salazar, what were the blood results in this case?
A. 0.21 grams per 100 mil of ethanol.
Q. Did we have any detection for acetone, methanol, or isopropanol?
A. No. They were all negative.

Q. What is the blood alcohol limit in the State of Texas?

A. To my knowledge, it's 0.08 percent, or 0.08 grams per 100 milliliters.

Q. And the defendant's blood came back at 0.21 grams per 100 milliliters?

A. That's correct.

Q. So she was well over the legal limit?

A. According to the data, yes.

MS. LITTLE: Your Honor, we pass this witness.

THE COURT: Defense?

CROSS-EXAMINATION

BY THE DEFENDANT:

Q. Mr. Salazar, let's begin by you discussing with us fermentation.

A. Fermentation?

Q. Yes.

A. It's the process by which alcohol is created through various microorganisms. That's a pretty brief overview of it.

Q. Well, Mr. Salazar, with respect to fermentation, do you agree that all conditions necessary for fermentation are already contained within the vial before you get it?

A. The actual blood vial itself?
Q. All the fermentation -- everything that's needed to cause fermentation, already exists in the blood vial before you get it?
A. Could you clarify your question, please?
Q. Well, meaning, that there could be -- all of the elements are already sealed within the blood before you have an opportunity to analyze it, it is a perfect breeding ground for that process before you even handle it.
A. That's actually -- I would say no because the blood tube contains a preservative that inhibits those microorganisms from producing ethanol.
Q. And what is that preservative?
A. It's called sodium fluoride.
Q. And how long has sodium fluoride been used to preserve blood samples in that way?
A. That, I have no knowledge of. I just know that in particular collection tubes, in gray tops especially, this is a known additive, a known preservative to be in those tubes.
Q. So for the seven years that you've been employed with the forensic science unit, has sodium fluoride always been an additive that was contained in the vials that you have tested?

A. To my knowledge, yes.
Q. To your knowledge?
A. Yes.
Q. Would there be checks and balances on that type of thing with respect to your labs before testing is done?
A. Well, there are some ways of testing, like looking at the date objectively and being able to tell, well, there is a rise in alcohol. You know, it could be attributed to this; it could be attributed to that. That's a question that's more appropriate for Dr. Guale, the expert reviewer, since I don't determine -- make that determination.
Q. Who is that? Doctor who, again?
A. Fessessework Guale.
Q. Okay. So Guale would know the answer to that? Is he your supervisor?
A. She, yes.
Q. She is?
A. Yes.
Q. I'm sorry.
A. It's okay.
Q. Okay. So we would need her to answer that. Okay.
Okay. If I were to ask you any more

questions about fermentation, would that be out of your scope of knowledge?

A. That's correct.

Q. Okay. But she would have that knowledge --

A. She could answer those questions.

Q. -- more than likely?

A. Yes.

Q. Okay. All right. Now, do you -- are you aware of just the normal bacteria and sugars that are already within the body that could be contained in those blood samples that can also yield -- cause a different result to be yielded once it's in your lab?

A. I'm sorry, could you --

Q. Bacteria and sugar?

A. Bacteria, you're talking about --

Q. That's already --

A. -- like, blood sugar.

Q. Yes.

A. I'm aware that that does occur in blood. Everyone has blood sugar levels.

Q. Yes.

A. Yes. As far as in the blood tubes themselves, once again, the blood collection tube, that's the purpose of having a preservative, such as sodium fluoride.

Q. So, does sodium fluoride completely eliminate -- to your knowledge, does sodium fluoride completely eliminate all yeast, sugar, and bacteria that would exist in the blood?

A. I think "elimination" is the wrong term to use.

Q. Okay.

A. Okay? Now, as far as how the actual process that sodium fluoride operates, because it does shut down what's called glycolysis, that would be a question that's more appropriate for Dr. Guale.

Q. Dr. Guale. Okay.

A. But, essentially, the preservative inhibits the yeast, the bacteria, microorganisms from producing sugar -- I'm sorry, not sugar -- ethanol. That's why it's in toothpaste, to keep bacteria from creating the acid that erodes your teeth.

Q. How likely is it that yeast is -- is already within that tube of blood when you get it? Has the sodium fluoride stabilized it? You said not eliminated it, but has the sodium fluoride affected the yeast where it would no longer show up in any testing?

A. As far as yeast, in toxicology, we don't do detection for yeast. That's a microbiology type of test. However, I can tell you in blood collection containers that contain preservatives, any number of

preservatives, that is their purpose to not -- once the blood is collected, that the alcohol values are not affected adversely from something like yeast, something like microorganisms; and that's why they're put in these containers.

Q. So the sodium fluoride, is there -- are there certain bacterias or substances that they can eliminate or stabilize and others that they cannot?

A. That's outside my scope of expertise.

Q. Outside -- okay. Now, are you aware that -- well, first give us a time line from the time that the blood was collected December 29th, 2012. When was it analyzed? On what date?

A. I don't have the chromatograms.

Q. Do you have it in your notes?

A. No, I don't have my chromatograms with me. Unless they were -- they would be part of discovery. I don't know if the discovery was ordered in this case.

Q. Okay. Well, since we don't actually have the time line, the length of time that the blood sample was stored or held, are you aware that delays such as that can affect results?

A. Yes. That's a known issue that's addressed in peer reviewed articles, as far as how long it takes, on average, for ethanol to dissipate out of a stored tube

in refrigerated conditions, for example.

But once again, that's a question that's more appropriate for Dr. Guale.

Q. Now, the actual blood draw, before it's -- when it's put into the vial, before it comes to you, can the nature of -- can the actual procedure affect, in any way, your analysis or your results?

MS. LITTLE: Objection, speculation.

THE COURT: Overruled on the aspect of can it. I mean, I'll let him answer that shortly; but I'm not going to let him speculate to other events. You can answer.

A. I'm sorry, could you repeat the question.

Q. (By The Defendant) Well, what I'm asking is: The way that the blood is collected, the way that it is placed into the tube with the needle, however it's actually placed in the tube, can that be a factor in how your, you know, analysis goes and what you yield from the analysis? Can that affect the number of --

A. To my knowledge, no.

Q. Okay. Have you, yourself, in your career, ever heard that the blood draws can affect the analysis up to 50 percent?

MS. LITTLE: Objection.

THE COURT: Sustained.

Q. (By The Defendant) What percentage have you, in your experience, heard --

MS. LITTLE: Objection.

THE COURT: Let's stay on what he did. Okay?

THE DEFENDANT: Yes.

THE COURT: Not on something else. We've already gone past the collection part.

Q. (By The Defendant) So, Mr. Salazar, how certain are you that the blood being analyzed is in the same condition that it was in at the time it was running through my veins, once it's being analyzed?

A. Now, as far as the preservation of the blood -- okay -- as I said before, your previous questions, there are numerous peer review articles talking about the stability of blood in refrigerated conditions. All of our evidence is refrigerated according to standard operating procedure. As far as the peer review articles, you would have to discuss that with Dr. Guale.

As far as my confidence in the state of the blood, we have a criteria in our standard operating procedure that says if blood is screened on one day and then confirmed or retested on a different piece of evidence related to that case -- totally different day, recalibration -- the two values must match within

5 percent. Otherwise, it cannot be called positive; and a number cannot be reported.

Because 5 percent is a very strict criteria -- they have to be very, very, very close, both of these values, in order to be reported -- I am confident that the blood did not undergo any sorts of changes or was damaged in any way that would affect the results to a degree that it would put it outside of this criteria.

Q. How many days can a vial of blood remain in that storage facility until it becomes compromised, even to a decimal point?

A. That, you would have to refer to the literature, which can be answered by Dr. Guale.

Q. Dr. Guale would know.

A. Would have a good idea of that.

Q. Now, you were mentioning earlier that you were specifically testing for ethanol; is that correct?

A. Well, that and also three others, but, yes, ethanol is primarily the --

Q. What are the three others?

A. Acetone, isopropanol, and methanol.

Q. And through your testing, you excluded the last three?

A. Correct.

Q. To what degree did you exclude them? Down to a negligible number or to a 0 percent?

A. There was absolutely no peak there present at all to give any kind of value.

Q. Okay. Now, I don't know much about chemistry; but the only way I can say it is: Is there any chemical strain that has a similar compound that ethanol does when you -- when you view it, that can be confused with ethanol?

A. That's an excellent question. Can I have the screen?

MS. LITTLE: Uh-huh.

A. That's a very good question. If you remember, I was talking about the column earlier.

Q. (By The Defendant) Yes.

A. Okay? I was only talking about one column. We actually run two at the same time. It's actually taking the sample and it's splitting the sample equally between both columns.

Now, the purpose for this, which is accepted by our accreditation criteria, one column will have ethanol coming here at -- let's make up a number -- 1.57; and that's one. Column 2 -- that's a bad looking peak, but this is Column 2 -- 1.68. Your reference standard that has this compound should be very -- it

should have -- this is where you're getting these numbers from. The purpose of the reference standard that these two, what we call, retention times, or when the detector sees ethanol, can be compared to your unknown sample. Okay?

Now, why do we have two? The first column will give you the blood alcohol value. Column 2 is what we call verification by retention time. It's been my experience, in several years, that I've never seen a compound that will come off at ethanol's time when you have two unique retention times, because Column 1 and Column 2 are manufactured the exact same way, except Column 2, the special material that interacts with alcohol, is thinner. So compounds go through this column faster.

So this other compound -- which what you're referring to is co-elution, can happen; but it would have to come at ethanol's two unique retention times. And more often than not, ethanol co-elution would look something like this (demonstrating). This is what we would spot. All of our analysts are trained to spot this, as well as our technical and administrative reviewers. This is a problem, what we would consider bad chromatography. It's unacceptable to be included in the report if this was truly the case, and it would've

been documented.

Q. So there could be another compound that could somehow disguise itself in those findings?

A. Now, I'm not saying that there isn't. I'm just saying it's highly unlikely, considering our protocols.

Q. Okay. So it can happen. Would Dr. -- I'm sorry?

A. Guale.

Q. Guale would -- you wouldn't know what Dr. Guale would know about that or --

A. I can't comment to what she would say.

Q. Okay. So, when you decide to go in the direction of specifically blood alcohol testing, do you ever go forward with testing with various other -- if you're testing for alcohol, are you not testing -- using the test that goes for, like, prescription drugs or --

A. No, that's a good question. Yes, there is criteria based on the alcohol value that has to be met that I don't set but the -- the toxicology management has come up with.

If the alcohol value is greater than -- greater than this value (indicating), it's only going to be tested for alcohol. Now, if it's been -- if it's less than this, say (indicating) -- yes, then it will be tested. It will be drug screened by both an

instrumentation method and by an -- I'm sorry, immunological drug screen.

Q. Okay. So when you are directed by toxicology management to go forward with the testing, at that point you've been directed to only screen for ethanol?

A. Well, this is actually a part of our standard operating procedure for ethanol testing, based on the initial screening. So the first time a sample is run, I look at that number, it's below this number; so I'll assign drug testing to it. If it is over, we'll just go ahead and confirm it.

Q. Okay. So, how do you -- how do you know to exclude every other substance that could've been tested for, when you only went in that direction?

A. As I stated before -- just being an analyst, I don't make policy. Obviously, however they came up with this policy, it has to be accepted by our accreditation standards. They cannot have a problem with it, in other words. Otherwise, we would get a finding.

Q. So, toxicology management instructed you to go forward with only the analysis that would detect ethanol and ethanol only?

A. Well, this is -- yes, this is standard operating procedure. So it's not really management that instructed; it's part of the procedure that we all

follow.

Q. So, ideally, is it possible that -- say that the test results were the lower decimal number that you had put on the board, it's possible to screen for as many types of substances as you choose; is that correct?

A. Yes, it is.

Q. But the standard procedure, when it's over that number, you showed us, is to go for that one and that one alone?

A. It is to test ethanol and the other three, the presence of the other three --

Q. Yes.

A. -- compounds.

Q. Okay. Now, you discussed the three check points that the vial goes through. Can you discuss with me: Who is at each level of that check point?

A. I would have to actually have the case folder and the results; but standard operating procedure states that one person, one set of eyes, checks the samples. The sample is the actual physical tubes, pieces of evidence.

Another analyst, another set of eyes -- okay -- has to check the samples, the vials, once they've been -- once they're ready for testing, before the instrument runs, and then immediately -- well, not

immediately; but afterwards, after the run is completed. Okay? And that's to ensure that during the run time, there wasn't some sort of malfunction that would cause the vials to fall out; the instrument didn't put it in the wrong place, you know; or at the very end of the spectrum, somebody came and decided to switch sample vials. They have to be in the exact same order that they were when they were previously checked. And the reasoning for that is my eyes, being human, there is a human error rate in everything that we do.

Q. Yes. Yes.

A. That is an effort to minimize or effectively take out as much human error as possible.

Q. Okay. And following along with that human error rate, now that rate is in triplicate. Now there's three people involved with that human error rate.

How many days would've passed between each person doing their part in the link in that three-point check -- that check point you said?

A. The day that it's run, all three check points are achieved.

Q. Okay. So everybody would have collectively done this and discussed it with one another, or how does that work?

A. Everything is documented. Say, for example, if

a tube was found -- blood tube was found out of order, that's documented. Say the wrong blood tube was pulled, that's documented. A vial -- I accidentally switched vials when I was loading them, documented. Everything that we do has to be documented and it must be disclosed as part of discovery and that is a rule.

Q. Okay. And today, do you have any of your notes here with you?

A. No, I do not.

Q. Okay.

A. But I will also go on to say that the analysis does not stop with me. I am not the last person to, you know, issue the report and that's it. If you look closely at the toxicology report, you'll see two signatures, bottom left and right. Okay?

Once I'm finished, the case will then go on to what's called technical review, where someone, a second pair of eyes, will then look through all of my work. Did I follow standard operating procedure, were these check points followed? Their job is to look for mistakes. Okay? They are there to check my work.

After they are satisfied that it was done according to our standards, procedures -- and they're also very experienced toxicologists themselves -- they're confident with the case, as far as this test is

completed, then it will go on to expert review.

As I mentioned, this would be Dr. Guale. She will look at the data, she will interpret it in respect to how it applies to this case and the incident -- the alleged incident involved, and she will make the determination that this case is ready to go.

So it actually goes through two more big checks before it is released. And that is how. So it doesn't just stop with me. There's two bigger check points involved.

Q. So because there are so many steps and several individuals involved in this testing, at any point can test results be retested and yield a different number for some reason?

A. I'm sorry, can you clarify the question?

Q. Can blood samples -- I'm sorry.

A. That's all right.

Q. Can blood samples ever be retested and yield a different number? Is that any -- is that even possible?

A. Of course.

Q. The same blood sample can be retested and yield a different number -- I'm sorry?

A. Of course.

Q. Okay.

A. The longer -- you know, we retain these

samples. If I ran it today, a year from now I'm not going to get the same result. It will be very close to the original value, you know, all things holding true and it was stored properly and it was -- you know, the chain of custody was maintained. I could essentially test that blood a year later. Now, it's not going to be the same result; but it's going to be very close.

But there's numerous peer reviewed articles, scientific publications that support the reasons why behind that. So it is known to happen because this is a common occurrence with long-term storage.

Q. And you mentioned earlier that you would typically have 20 to 30 batches in -- tubes of living and deceased vials; is that true?

A. Yes. Well --

Q. Altogether?

A. -- 30 per batch --

Q. Separate --

A. Per batch; but, yes, you're correct.

Q. Okay. So these are 20 to 30 separate individuals, living and dead, that you would have -- you log -- you consider it logging, or how do you -- what are you doing? Do you write on these bags before you submit them?

A. No. I don't personally do that. We have an entire section of the laboratory dedicated to making sure -- receiving evidence and distributing evidence to the rest of the sections of the laboratory for the appropriate analysis. Okay? That is their responsibility. They have their own standard operating procedures for that.

Q. And to the best of your knowledge, is there any detailed information as to how all of those blood tubes were kept separate, in relation to this trial?

A. Every -- well, since it's not here, and to my knowledge, I don't have any sort of requests for -- by either side of -- you know, either side or from the Judge himself, this -- we retain these samples -- okay -- in long-term storage where they sit until the submitting agency either comes for them or the judge of the court requests it, which in that case, a constable would have to bring it from us, from our facility, to here and then take it back to their -- to their -- wherever they are at. And they take sole possession of it.

So, yes, currently, it's in long-term storage.

Q. Okay. And in your opinion, long-term storage is a negative toward finding correct results in an

analysis?

A. I'm sorry, you're going to have to --

Q. Does long-term storage, does that go against -- does it work against your results?

MS. LITTLE: Objection, Your Honor, relevance. She's talking about after. This blood was tested in January of 2013.

THE COURT: Sustained. I mean, you're dealing with the vials now; and there's no reason for us to even deal with them now. So let's proceed. We're wasting time here, guys. Come on.

Q. (By The Defendant) You mentioned earlier about the labels that were on the bags, and you specifically said it's for photographic purposes only. What does that mean?

A. It means that if there's -- we have to -- whenever you're photographing evidence, you have to be able to -- you have to be able to identify what you're looking at. Otherwise, it's just a bag with a couple of bloods. You know, we need some sort of designator: What are we looking at; what case number are we looking at, which will lead to what offense report or what information; who is this person? So that's -- it's only there for photographic reasons.

There are additional labels that you don't

see, because we want to photograph -- excuse me. There are additional labels that get put on all pieces of the evidence: The bag, the tubes, everything is accounted for in our database. It must be because it's evidence. So that is to clear up any kind of misunderstanding: Why isn't this label on this tube, it doesn't look like the same label. Well, we're just showing it to you because we are trying to show that this is the photograph of the evidence associated with this case.

Q. Now, back to that gas -- is it a -- how do you pronounce that?

A. You can just call it a GC.

Q. A GC. Okay. But that is the machine that would test these blood samples?

A. Correct.

Q. To the best of your knowledge, can these machines result in presumptive determination of alcohol, as opposed to confirmatory results?

A. Presumptive? Okay. Presumptive --

Q. Specific to alcohol. Excuse me.

A. Right. Correct. Now, confirmatory alcohol, to my knowledge -- to my knowledge as in the procedures that I've done, performed at this office -- have never been presumptive. Only under extenuating circumstances. And even then, to the best of my knowledge, we've never

released a report with a presumptive alcohol. In other words, it was only run to see the presence of it.

Q. And what do you consider extenuating circumstances?

A. There would've -- there would have to be -- I can't think of any one particular scenario. But that is not a judgment call I can make. That has to be deferred to a toxicologist, one, who can make that determination and proceed to document the reasons why we did -- we didn't continue with the confirmation. Which would be understandable if, say, we didn't have enough blood volume to test and confirm. But even under those circumstances, like I said, I couldn't make that -- that's not my call to make.

Q. Okay. Now, earlier, you mentioned the two drops of blood that you take from -- is it the very top of the vial, is what you mentioned, that you take the two drops from, specifically?

A. Well, we insert our pipette into the blood tube and just withdraw. I can't tell you where exactly. It's not going to be the same place every time. It's repetitive, but it's going to be in roughly the upper quarter of the tube.

Q. The consistency of blood and with that preservative perhaps being in there, is there any way

that there's a different consistency at the top than there is at the bottom, settling, or whatever happens with blood --

A. That's a very good question. That's why we always invert and mix our blood tubes prior to analysis.

You're absolutely correct. That can happen, you know, if blood tubes remain upright for long periods of time. However, you must invert your tube prior to testing so that all the components of blood -- your serum, red blood cells, white blood cells -- all of the material is mixed in there so you get a more representative number. So something that isn't going to be a cause for concern.

Q. Would that be something someone would've done manually, or does a machine shake the blood?

A. We have a machine that does it; but to my knowledge, when the blood is drawn, this process is also done. It's inverted after blood draw.

Q. Is it merely turned over on its head and turned back, or is it some sort of shaking process? What is that procedure?

A. The machine that we use is a tube rocker. All it does is invert the tubes to about a 45-degree angle.

Q. Okay.

A. And it's a gentle rocking motion --

Q. Okay.
A. -- even at its fastest.
Q. Okay.
THE DEFENDANT: One moment, please.
Q. (By The Defendant) Now, Mr. Salazar, when you mentioned ethanol, is there anything that any of would be familiar with in our daily lives that would contain ethanol, besides alcoholic beverage?
A. These compounds -- ethanol and all these other compounds -- are found in a variety of products. Now, ethanol, primarily ethanol, there's not too many products that I'm aware of outside of liquor, wine, beer, spirits that would have ethanol in them.
Now, the other compounds that we look for, yeah, you find those in a wide variety of products but not so much ethanol. I can't think of one off the top of my head at the moment.
Q. Now, when you mentioned that you go ahead and put the vial on that -- is it GCS?
A. We just call it GC.
Q. GC machine -- okay -- and you walk away, how are you certain that when you return that the machine hasn't been compromised in any way?
A. Very good question. We are -- our floor where the blood alcohol instrument is actually housed in, the

actual room itself, we have multiple layers of security. The room itself, you would need a specialized access card to get in; and even then, access is not granted to all of toxicology, just the people who have direct responsibilities with the instrument and with the analysis and also management.

To get on the floor, you have to have access. To get inside the building, you have to have access or be escorted by a staff member; and the premise is monitored 24 hours a day, seven days a week by a sheriff constable.

So it's a very secure facility; so the only person -- or the only persons who can even -- can even alter, you know, by taking off samples or introducing some sort of contaminant to the instrument would have to be someone in toxicology who has access to that room and who can actually get inside the building. And like I said, it's also monitored, has surveillance 24/7 on every floor.

Q. So besides any human causing any errors with the computer, have you ever known the computer to go down for any servicing in your seven years that you've been there?

A. Oh, yes. It does happen. Computers are machines. They're like cars. Cars break down;

instruments break down.

We log all of our repairs. Anytime that there's any kind of problems that are -- that appear, we have to log it in our maintenance log, which is a part of our discovery packet. It shows what the problem was, when it occurred, how did we fix it, and who fixed it, whether it's one of the analysts themselves or we have to call out the GC manufacturer, a representative from them, to come. And even then we list and we document what was done and we also have an accompanying service report. Software error, that's also handled by the GC manufacturer field service engineer; and we would have documentation supporting what they did, when they did it, and response to the problem.

But, yes, it does occur.

Q. And have the computers ever, to the best of your knowledge, compromised any of these test results in any way?

A. No. If there is a problem that's computer-related, those results are not -- they are included in discovery and with a case folder, but those results are not factored.

Q. Okay.

A. It is retested when the problem is solved.

Q. So when you leave the machine and you walk away

and you return, how are you certain that there wasn't something like a power surge that could've quickly shut off and come back on and continued the analysis? How are you certain that something like that did not occur?

A. We are very familiar -- because it is an old building. We are very familiar with how a power surge will look and affect our instrument because it will spit out data that looks essentially like this (indicating). Okay?

If a sample is running, I should at least see my internal standard peak. If I have 50 pages of that -- and, also, I would call the building manager; they will issue some sort of statement via internal e-mail -- then this correlates to the incident of power surge.

So, of course, these samples are repeated on a different day when the surge has been -- but we do include all that data also in the folder. You cannot disregard that data, throw it away. You have to include it.

Q. Okay. Just a couple more questions. Just to revisit: The two drops of blood that were removed from the vial, did you say earlier that two drops were removed from one vial; or two drops were removed from each vial?

A. Well, it's approximately -- you can equate it to two drops. It's 100 microliters. But it's -- if there are two blood tubes associated with the case -- sometimes, we only get one blood tube. That's all evidence that's submitted, that's all that can be tested. But if I have two blood tubes -- okay -- I will screen one blood tube; and I will remove what we call an aliquot. Okay? Smaller volume from a larger volume, that's what an aliquot means.

A small aliquot from the first one, and test that. Then another day -- okay -- and after totally recalibrating the instrument, we will test the second blood tube. And it might be myself or it could be a different analyst or it could be -- if it were two different analysts, I wouldn't be here. But that's how it's done.

Q. Okay. And I'm just going to ask you a little bit more about fermentation. If you don't know, I understand you told me to ask Dr. Guale most of that. But perhaps you do know if these --

THE COURT: Is there any evidence in regards to the blood being fermented? If there's nothing in that shows that the things could've been violated, then we're wasting everybody's time here. So let's please -- okay? If you've got --

THE DEFENDANT: Don't ask it?
THE COURT: -- any kind of thing, then let's please -- let's move on.
THE DEFENDANT: Okay. I pass the witness for the moment.
THE COURT: All right. State?
MS. LITTLE: Brief redirect, Your Honor.
(State's Exhibit No. 12 published)

REDIRECT EXAMINATION

BY MS. LITTLE:

Q. Mr. Salazar, I'm showing you State's Exhibit 12 again. We have the submission date up here, December 29th of 2012, correct?

A. Correct.

Q. That is when this blood was dropped off at the Institute of Forensic Sciences, correct?

A. Correct.

Q. And then we have the lab report date, which is January 15th of 2013.

A. Okay.

Q. Is that -- that date is after your analysis has been reviewed by two other people, correct?

A. Correct.

Q. So it is two weeks between the date that the blood is dropped off and the date that this report is

created, correct?

A. Correct.

Q. Once you have your results -- and in this case, your results were a 0.21 blood alcohol concentration -- your results are reviewed by two people?

A. Correct.

Q. The first person who reviewed it was Patricia Small?

A. Correct.

Q. She goes over everything that you did to ensure these results are accurate and competent, correct?

A. Correct.

Q. After she does that, it's reviewed and her work, then, is also reviewed by a third person: Dr. Fessessework Guale in this case, correct?

A. Correct.

Q. And she goes over Patricia's and your work, to confirm that what both of you did is correct and competent?

A. Correct.

Q. Would you ever release a report to Patricia and Dr. Guale if you did not feel confident?

A. No, I would not.

Q. Would Patricia release a report to Dr. Guale if she did not feel confident?

A. No.
Q. And would Dr. Guale ever release this report to the District Attorney's Office?
THE DEFENDANT: Objection, Your Honor. There's no way for him to know if she would ever do that.
THE COURT: Sustained.
Q. (By Ms. Little) To the best of your knowledge, would she release a report --
THE DEFENDANT: Objection, Your Honor. There's no way he can offer that as fact.
THE COURT: Sustained.
Q. (By Ms. Little) Have you ever known a report to be released --
THE DEFENDANT: Objection, Your Honor. We're talking about this report only.
THE COURT: That's what we're dealing with. Sustained.
It's all right. Let's go. Move on.
Q. (By Ms. Little) And to confirm: You got this number by running this blood on two separate dates, correct?
A. Correct.
Q. Y'all also have internal standards and protocols that you have to follow, correct?

A. Correct.
Q. And if any of those protocols or standards were not followed, we would never see this report, correct?
A. Correct. If there was such protocols that were broken, it would have to be documented extensively throughout the report. Okay?
Q. Okay.
A. And it may even warrant a retest and, of course, the submitting agency, as well as the District Attorney's Office -- or whomever requests this because it is open record for public information -- it would have to be disclosed.
Q. So if there had been any issues, we would have known about it?
A. Yes.

MS. LITTLE: Pass the witness, Your Honor.

THE COURT: Defense?

THE DEFENDANT: Brief redirect [sic], Your Honor.

RECROSS-EXAMINATION

BY THE DEFENDANT:

Q. Now, the time line that was discussed here of that two weeks by the prosecutor's office, that does not necessarily mean that the final test had occurred in that two-week time frame, does it, from blood draw to

report --

THE COURT: Have a seat.

A. I'm sorry, could you repeat --

Q. (By The Defendant) From blood draw to report, that doesn't actually mean that it only took two weeks for all analysis of all the blood to have been analyzed, does it?

A. I'm sorry, could you clarify your question?

Q. That two-week period, from blood draw to first report, would everything have already taken place, all analysis of the blood? Does that necessarily mean that?

A. The report cannot be issued without the entire case and all analytical requests for the case being completed and reviewed. That's the only way that this report can be issued.

Q. But we discussed earlier that even a short delay or changes in temperature can exacerbate whatever condition that blood is in; is that correct?

MS. LITTLE: Objection. Defendant is testifying.

THE COURT: Sustained.

Q. (By The Defendant) Can even a short delay have any negative effect on the blood results?

A. Are we talking about delay between when it was screened, when it was confirmed, and then when it was

reported out?

Q. That entire two-week period, even a short delay of two weeks, in your opinion?

MS. LITTLE: Objection, asked and answered.

THE COURT: Overruled. I'll let him answer one more time so we can get on with it.

A. The -- as I discussed earlier, yes, it is known through scientific peer review articles that there is alcohol loss over time. However, the loss, to my knowledge -- again, this is not -- this is my knowledge -- can be correlated. Okay? It's not a substantial loss. It shouldn't be if it's stored properly under the correct conditions and under conditions that are acceptable by accreditation. Okay?

So -- and, usually, even within the time frame of a blood draw to the -- you know, to the -- to the submission report date, the data is assessed by two other individuals who have knowledge of this procedure and who are competent of the procedure. It's for them to decide whether or not there is anything odd or peculiar or suspicious pertaining to the results from two separate runs. Because my part actually ends way before that determination is made. And that would be Dr. Guale's responsibility, as the interpreter of the

data and the expert.

Q. (By The Defendant) And one last question: Does the strength of that sodium fluoride hold its effectiveness indefinitely?

A. That is outside of my area of expertise, unfortunately.

Q. Okay.

THE DEFENDANT: Pass for the time.

THE COURT: State?

MS. LITTLE: Brief redirect, Your Honor. It will be really brief. I promise.

THE COURT: Go ahead.

FURTHER REDIRECT EXAMINATION

BY MS. LITTLE:

Q. Okay. What Ms. Sitawisha keeps talking to you about, the alcohol changing and -- she's talking about alcohol loss, correct?

A. Correct.

Q. And that occurs when a vial of blood has been in a refrigerator for X amount of time?

A. Yes, that's true.

Q. Or not in a refrigerator?

A. Correct.

Q. And the alcohol, the number actually goes down, correct?

A. Correct.
Q. So worst case scenario --
THE DEFENDANT: Objection, Your Honor.
Q. (By Ms. Little) If the alcohol number went --
THE COURT: Overruled.
Q. (By Ms. Little) -- down -- worst case scenario, if that had occurred in this case, this number would actually be lower than what the blood was at the time of the blood draw?
A. That's correct.
MS. LITTLE: Pass the witness, Your Honor.
THE COURT: State -- I mean, Defense?

FURTHER RECROSS-EXAMINATION

BY THE DEFENDANT:

Q. Mr. Salazar, do you believe that there is pertinent information that your supervisor, Dr. Guale, could give that would give some weight to what we're all talking about here that we haven't been able to delve into because you just don't have the experience with that?
MS. LITTLE: Objection, speculation.
THE COURT: As in to -- what are you trying to relate to? Of your possibility of what things could have occurred, versus what the analysis were?
THE DEFENDANT: All of the above. How --

MS. LITTLE: Your Honor, may we approach, please?

(At the Bench, on the record)

MS. LITTLE: For appeal purposes, I want this to happen up here.

THE COURT: What are you getting at?

THE DEFENDANT: I need to talk to --

THE COURT: She's not coming in. End of story. There's no need to have her testimony. There's nothing that she could testify above what he has already testified to in regards to this case.

THE DEFENDANT: Well --

THE COURT: If you wanted to bring your own expert in, you could've done that. Sit down.

(In open court)

THE DEFENDANT: I pass the witness.

THE COURT: State.

MS. LITTLE: State has no further questions for this witness, Your Honor. May he be excused?

THE COURT: You may. Thank you so much.

THE WITNESS: Thank you, Your Honor.

THE COURT: State, call your next witness.

MS. LITTLE: Your Honor, at this time the State rests.

THE COURT: Ladies and gentlemen, we're going to take just a very short break. I'm going to see what's going on here and to see what we're going to -- if -- how is everybody doing over there?

Let me see how long this is going to take, and I'll make a decision to come back or finish it. I'll let you know in just a minute.

(Jury exits courtroom)

THE COURT: Do we have any motions?

THE DEFENDANT: No, Your Honor.

THE COURT: Okay. All right. Are you ready to put on your case? How long -- what are you going to put on? And I'll know what I'm dealing with right now.

THE DEFENDANT: Well, I'm going to discuss what I was doing in that parking lot.

THE COURT: Are you going to get on the stand?

THE DEFENDANT: No.

THE COURT: Then you can't discuss what you were doing in the parking lot.

You can't say anything.

THE DEFENDANT: In my closing.

THE COURT: No, no. That's closing.

THE DEFENDANT: That's what I was talking