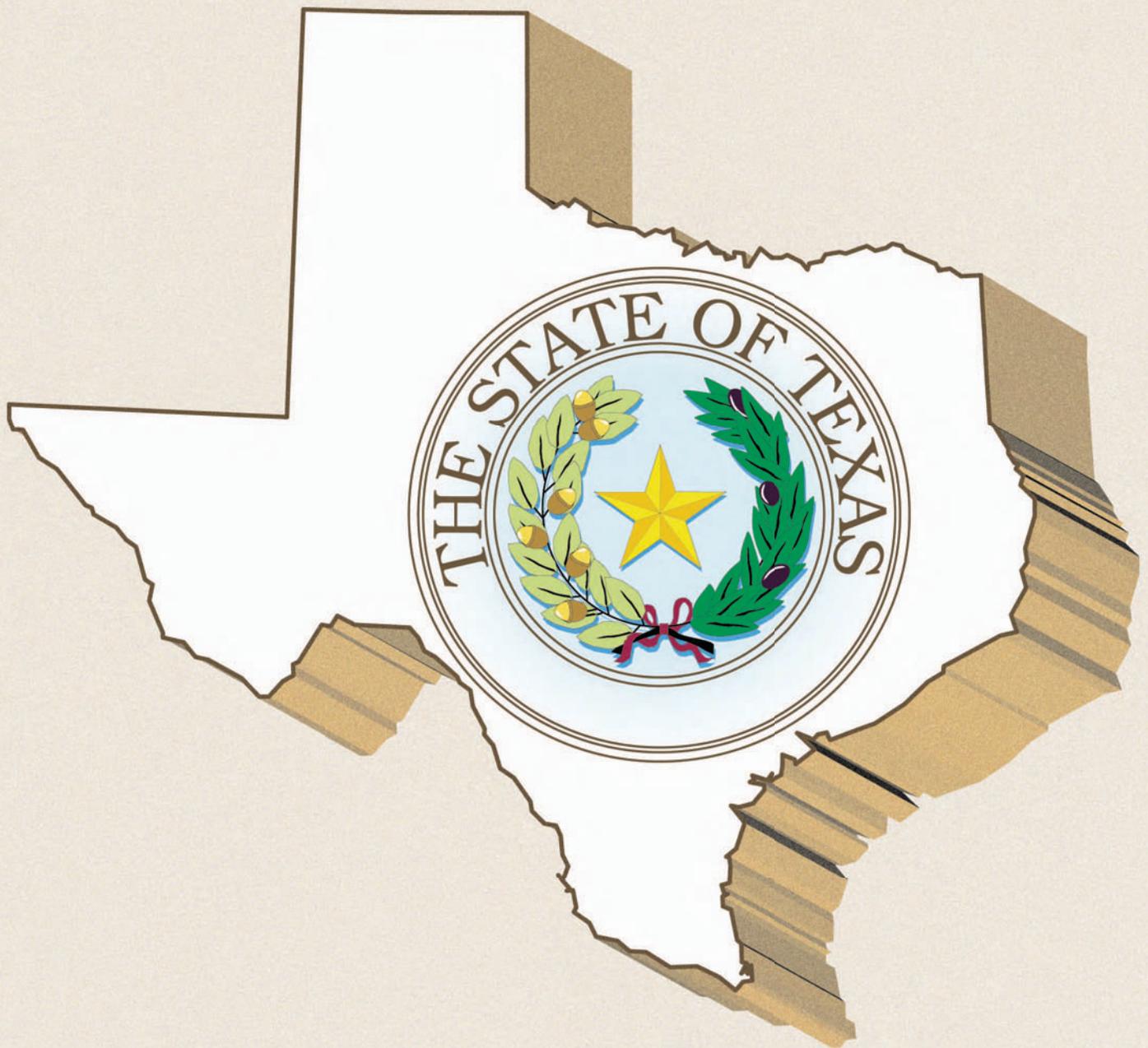


TEXAS BREATH ALCOHOL TESTING PROGRAM



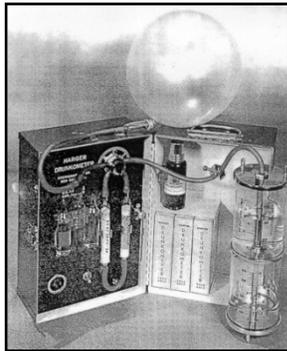
OPERATOR MANUAL



INTRODUCTION

Ethyl alcohol has been a factor in motor vehicle crashes since the appearance of the automobile. Studies as early as 1904 have shown that drivers under the influence of alcohol are incapable of safely operating a motor vehicle.

In 1936, the National Safety Council recognized the problem of alcohol impaired driving and established the Committee on Tests for Intoxication, now referred to as the Alcohol, Drugs and Impairment Division. This committee formalized the use of tests for physical signs of impairment and scientific tests for alcohol. The committee also encouraged and supported scientific research in all aspects related to the problem of alcohol and transportation.



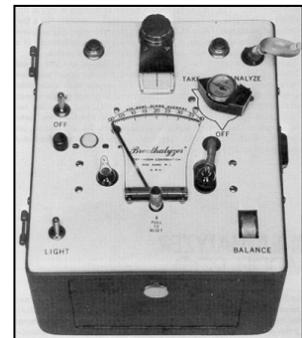
Numerous types of breath alcohol testing devices were developed. Utilizing these new scientific instruments, Texas became involved in breath alcohol testing with pilot programs in the late 1940's and early 1950's.

Texas began analyzing breath alcohol samples statewide in 1968 using the Breathalyzer®. In 1980 the Intoxilyzer 4011AS-A® was introduced in Texas, followed by the Intoxilyzer 5000® in 1988. In 2015 Texas began using the Intoxilyzer 9000®. The biggest difference between the instruments as they have developed is not their accuracy, precision, or method of analysis, but their automation and ease of operation.

In 1960, the National Safety Council recommended that an alcohol concentration at or above 0.10 be considered evidence of intoxication. As research continued, the committee recommended in 1971 an even lower presumptive concentration of 0.08. Further research has shown that the ability of many individuals is impaired for driving and driving-related tasks at alcohol concentrations below 0.08, and that for some individuals, impairment occurs at alcohol concentrations below 0.05.

In 1969, the Texas Legislature passed the Implied Consent Law, which gave authority to the Texas Department of Public Safety, through its Office of the Scientific Director, to develop rules and regulations for breath alcohol testing throughout the state. The Texas Breath Alcohol Testing Regulations establish the parameters within which breath alcohol testing is to be administered and regulated.

The state is divided into more than thirty Technical Supervisor areas. Technical Supervisors are trained forensic scientists charged with the responsibility of administering, regulating, and enforcing all aspects of breath alcohol testing within their assigned area.



Technical Supervision is provided for breath alcohol testing programs by several different sources. The largest single groups of Technical Supervisors are employed by the Department of Public Safety; however, several Technical Supervisors are employed by local agencies. Technical Supervisors, regardless of their employer, supervise the breath alcohol testing activities of all the operators in their assigned area. The relationship and communication between certified operators and their Technical Supervisor is vital to the success of the program.



Introduction

Preparer

Heather Greco
Quality Assurance Specialist

Date: 9/24/2015

Concurrence

Forrest W. Davis
Quality Assurance Coordinator

Date: 9/24/2015

Version #	Effective Date	Brief Description of Change(s)
00	10/01/2015	Original Issue



INTOXILYZER 9000 INSTRUMENTATION & ANALYSIS

INSTRUMENT REQUIREMENTS

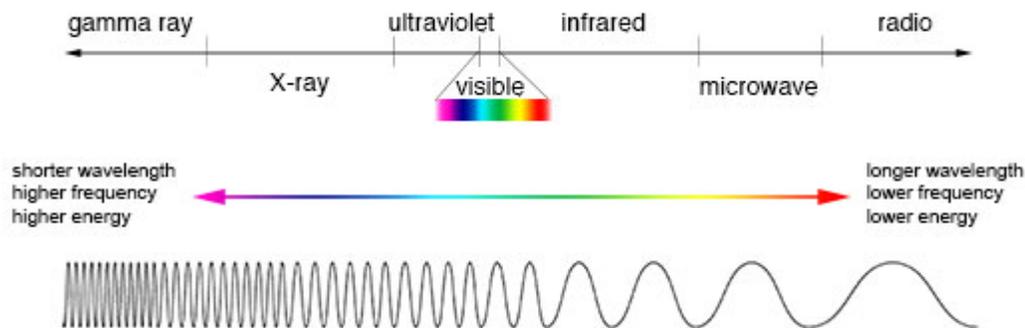
The Texas Breath Alcohol Testing Regulations place requirements on any breath alcohol testing instrument that is to be certified for evidential purposes in Texas. These requirements are:

- Expired breath specimens shall be analyzed
- The instrument shall incorporate a reference system, the result of which must agree within plus or minus 0.01 g/210 L of the nominal value or such limits as set by the Scientific Director
- The specificity of the procedure shall be adequate and appropriate for the analyses of breath specimens for the determination of alcohol concentration for law enforcement.
- Any other tests deemed necessary by the Scientific Director to correctly and adequately evaluate the instrument to give correct results in routine breath alcohol testing and be practical and reliable for law enforcement purposes.

There are various analytical methods that can be used to measure the alcohol concentration in a breath specimen. The Intoxilyzer 9000 meets the requirements set forth by the Regulations using infrared spectrometry.

INFRARED SPECTROMETRY

The basis of infrared (IR) breath analysis is the absorption of infrared energy by alcohol molecules in a breath specimen. IR spectrometry is an analytical method that measures the absorption of radiant energy by a substance and is widely used in the scientific community.



Comparison of different types of radiant energy

DETERMINATION OF ALCOHOL CONCENTRATION

The Intoxilyzer 9000 uses a scientific law known as the Lambert-Beer Law to determine the alcohol concentration in a breath sample. The Lambert-Beer Law states that the amount of energy absorbed by a particular substance is proportional to the number of absorbing molecules in the sample. The amount of infrared energy absorbed in a breath sample is proportional to the amount of ethanol present in a breath sample introduced into the instrument sample chamber. The Intoxilyzer 9000 reports the measured alcohol concentration in grams of alcohol per 210 liters of breath, as specified by Texas statute.



SPECIFICITY

The Intoxilyzer 9000 uses multiple wavelengths of infrared energy. For any given molecule, such as ethanol, the absorption patterns of specific wavelengths are unique, similar to a fingerprint. Other substances, such as acetone, absorb wavelengths in patterns different from ethanol. When the Intoxilyzer 9000 detects differing absorption patterns, it stops the test.

SIMULATOR

The Texas Breath Alcohol Testing Regulations require the instrument to incorporate a reference system. The simulator is a device that meets the reference system requirement. The simulator delivers a known concentration of ethanol to the instrument to verify the accuracy and calibration of the instrument. Technical Supervisors prepare solutions for use in the simulator called reference sample solutions. The analysis of the reference sample solution is called a calibration verification. Two calibration verifications are conducted as a part of each Subject Test. The acceptable range for each calibration verification result is 0.070 - 0.090 g/210 L. If a calibration verification result falls outside of the acceptable range, the instrument will stop the test.



The proper operating temperature of the reference sample solution is 33.80 - 34.20°C. If the temperature of the solution is not within the acceptable range, the instrument will stop the test. The Operator may verify the solution temperature by observing the digital thermometer display on the front of the simulator. The temperature of the solution will also be printed on the Analytical Report. If the simulator displays a status code, it may be turned off and turned back on by the Operator. If the status code persists, the Operator should contact the Technical Supervisor.

15 MINUTE WAITING PERIOD

The Texas Breath Alcohol Testing Regulations states:

*An Operator shall remain in the **continuous** presence of the subject at least 15 minutes **immediately** before the test and should exercise reasonable care to ensure that the subject does not place any substances in the mouth. Direct observation is not necessary to ensure the accuracy of the test result.*



The waiting period is the 15 minutes **immediately prior** to the test, not just any 15 minute period. The purpose of the waiting period is to ensure that there is no residual (mouth) alcohol present. Only certified breath test Operators may conduct the waiting period. The Operator should exercise reasonable care to ensure the subject does not place any substance in their mouth. If at *any point* during the 15 minute waiting period the subject places any substance in their mouth, the waiting period **must** be restarted.

The Texas Breath Alcohol Testing Program uses a three prong approach to ensure that the Subject's breath alcohol results are not affected by residual alcohol. In addition to the 15 minute waiting period, the instrument has a residual alcohol detection system and the two subject tests must not differ by more than 0.020 g/210 L. Taken together these safeguards ensure that the Subject's breath alcohol results are not affected by residual alcohol.



INTOXILYZER 9000 NAVIGATION

There are several different buttons displayed on the instrument that will be used to navigate through the touchscreens. Most buttons require a single tap. The Stop, Clear, and Refused buttons require a double tap.

	KEYBOARD		GO FORWARD
	DL MAGNETIC SWIPE		CLEAR SIGNATURE BOX (double tap)
	DL 2D BARCODE		SUBJECT REFUSED (double tap)
	START THE TEST		ACCEPT
	STOP THE TEST (double tap)		OPTIONS MENU
	EXIT TO START SCREEN		GO BACK





STARTING THE TEST

When the Intoxilyzer 9000 has not been used for 30 minutes, the instrument will go into standby mode and the touchscreen will be either blank or displaying one of several screensavers. To bring the instrument out of the standby mode, tap the touchscreen with your finger or the stylus. At the conclusion of a two minute countdown, the Start test button will then turn green and the instrument will be ready for testing. The Intoxilyzer 9000 is equipped with a keyboard, a magnetic card reader, a 2d barcode reader and a color touchscreen display for data entry. The instrument will prompt the Operator to choose the method of data entry. The Operator will have the opportunity to review all of the data entered before the test begins. If the instrument will not power up, the Operator should contact the Technical Supervisor.



CONDUCTING A SUBJECT BREATH ANALYSIS

Before beginning a subject test, the Operator should take a few moments to explain the testing procedure to the subject. The instrument will require the subject to provide two separate breath samples in order to complete the test. To deliver an acceptable sample, the subject should provide a steady flow of breath into the instrument. A tone will sound as long as the subject is providing an acceptable sample.

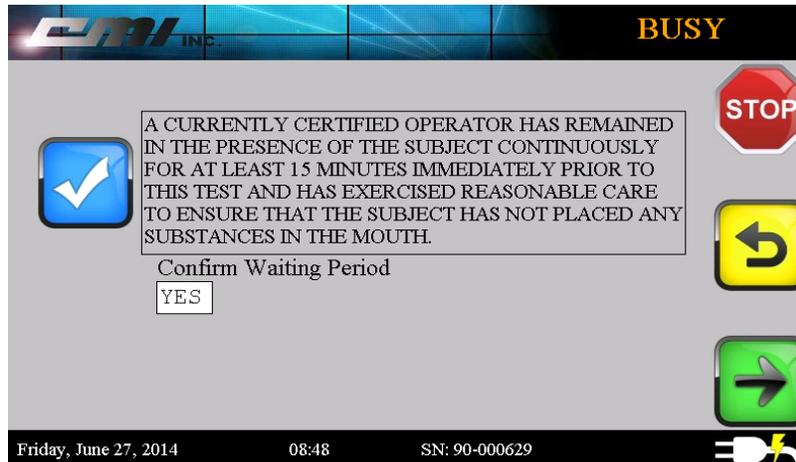


The subject must blow into the Intoxilyzer 9000 with sufficient pressure to sound the tone for a minimum amount of time and until the slope detector is satisfied. The slope detector monitors the rate of change in the alcohol concentration of the breath sample. When the rate of change slows, the slope detector will be satisfied. The Intoxilyzer 9000 allows approximately three minutes for the subject to deliver an adequate breath sample. If the subject does not satisfy all of the breath sample requirements within three minutes, the Intoxilyzer 9000 will stop the test.

To begin a test, tap the green Start test button. The Intoxilyzer 9000 will prompt the Operator to log in by entering their certificate number and a PIN (the last four digits of your DL number). Press the arrow pointing to the right to continue. The Operator will then select the type of test to be conducted. The instrument will prompt the Operator to choose the method of data input. The Subject's information can be entered manually using a keyboard,

electronically by swiping the magnetic stripe, or scanning the 2d barcode on the Subject's DL. If the subject's date of birth is unknown, enter the current date.

The instrument will display a statement asking the Operator to confirm the completion of the 15 minute waiting period. To do this, the Operator must check the blue button by tapping it and by typing the word **YES** in the box to confirm. The Operator should then place their signature in the box on the touchscreen. **Never use a pen or pencil.**



The instrument will begin the testing sequence by automatically conducting an electronic check of the instrument's operating system called the Operational System Check. The Operational System Check will be conducted again at the conclusion of the testing sequence. If there is an error during the check, the instrument will stop the test. At various points during the testing sequence, the instrument will conduct an air blank. During the air blank the instrument will purge the sample chamber with room air. The result of the air blank analysis must be 0.000 or the instrument will stop the test.

When the testing sequence reaches the Subject Sample 1 and Subject Sample 2 portion of the test, the instrument will automatically instruct the Subject to "please blow long and steady" in English. A Spanish version can also be activated by tapping the green button on the touchscreen. A rectangular box on the touchscreen will fill from the left as the Subject blows into the instrument. A Subject test may be stopped at any time by double tapping the **STOP** button. If a subject refuses to provide a breath sample, by words or actions, double tap the REFUSED button. Once a subject begins to deliver a sample with sufficient pressure to sound the tone, the REFUSED button will become unavailable. In the event that the subject begins to deliver a breath sample and subsequently refuses to continue, the Operator should allow the instrument to stop the test as a deficient sample.



The calibration will be verified twice during each complete test sequence. The calibration verification results must not fall outside of the acceptable range (0.070 - 0.090 g/210 L) otherwise the instrument will stop the test. If the temperature of the reference sample solutions is outside of the acceptable range (33.80 - 34.20°C), the instrument will stop the test.

After the testing sequence is complete, the subject test results will be displayed on the touchscreen and an **Analytical Report** will be printed. All evidential tests are stored in the Intoxilyzer 9000 as individual tamper resistant pdf documents. An Analytical Report can be printed from the pdf at any time.

Complete Test

For a test to be considered properly completed, it must contain the following elements:

1. All air blanks must be 0.000
2. Subject results 1 and 2 must not differ by more than 0.020 g/210 L
3. Both calibration verification results must be in the acceptable range: 0.070 - 0.090 g/210 L
4. The reference sample solution temperature of both calibration verifications must be in the acceptable range: 33.80 - 34.20°C
5. "Test Complete" is printed in the Sequence of Analysis box
6. The signature of the Operator

Incomplete Test

The instrument has safeguards in place to ensure the integrity of the results. When a test is stopped, either by the Operator or the instrument, the Intoxilyzer 9000 will display the reason the test was stopped and instruct the Operator on how to proceed. If the instrument instructs the Operator to contact the Technical Supervisor, the Operator should do so as soon as possible. If possible, it is recommended that the Operator call the Technical Supervisor from the Intoxilyzer room so that they can respond promptly.

Regardless of the operational message displayed, the most important thing to remember is: Read and follow the instructions displayed on the touchscreen.

Updating Operator Information

If an Operator needs to change their information, they must log in using the Options button and tap the Operator Update Information button. The name may be changed only by scanning the 2d barcode or swiping the magnetic stripe on the Operator's driver license (DL). The name on the DL is the Operator's official name. If an Operator wants to change their name, they must first update the information on their DL.



TEXAS FORENSIC BREATH ALCOHOL ANALYTICAL REPORT

Report Number: 00061800001 Date: 05/19/2015
Analytical Instrument: Intoxilyzer 9000 Location: University PD
Serial Number: 90-000618 Technical Supervisor Area: 099

Subject Name: MORRIS, MICHAEL ROBERT JR

Date of Birth: 04/15/1981

Subject Result 1: 0.117 g/210 L

Subject Result 2: 0.119 g/210 L

Sequence of Analysis:

Table with 3 columns: Test Name, Result, and Time. Rows include Operational System Check, Air Blank, Cal Verification, Solution Temp., and Subject Results 1 and 2.

Test Complete 05/20/2015

Operator Signature: Larry Jordon

Fifteen minute waiting period completed - YES

Operator Name: JORDAN, LAWRENCE JACOB

Certificate Number: 01004

All air blank results must be 0.000.
Subject results 1 and 2 must not differ by more than 0.020 g/210L.
Calibration verification results acceptable range: 0.070 - 0.090 g/210L
Reference sample solution temperature acceptable range: 33.80 - 34.20°C



TEXAS FORENSIC BREATH ALCOHOL ANALYTICAL REPORT

Report Number: 00061800002 Date: 05/21/2015
Analytical Instrument: Intoxilyzer 9000 Location: University PD
Serial Number: 90-000618 Technical Supervisor Area: 099

Subject Name: SMITH, JOHN PATRICK

Date of Birth: 02/18/1979

INCOMPLETE TEST: INTERFERENT DETECTED

Test stopped by instrument. An interferent was detected in the subject's breath sample.

Do not attempt to conduct another breath test on this subject. It is recommended that a blood sample be obtained.

Table with 3 columns: Test Name, Result, and Time. Includes rows for Operational System Check, Air Blank, Calibration Verification, Solution Temp., and SUBJECT RESULT 1.

Operator Signature: Larry Jordon

Fifteen minute waiting period completed - YES

Operator Name: JORDAN, LAWRENCE JACOB

Certificate Number: 01004

All air blank results must be 0.000. Subject results 1 and 2 must not differ by more than 0.020 g/210L. Calibration verification results acceptable range: 0.070 - 0.090 g/210L. Reference sample solution temperature acceptable range: 33.80 - 34.20°C



TEXAS FORENSIC BREATH ALCOHOL ANALYTICAL REPORT

Report Number: 00061800003
Analytical Instrument: Intoxilyzer 9000
Serial Number: 90-000618

Date: 05/22/2015
Location: University PD
Technical Supervisor Area: 099

Subject Name: PRACTICE, TEST

Date of Birth: 05/22/2015

Subject Result 1: 0.000 g/210 L

Subject Result 2: 0.000 g/210 L

Sequence of Analysis:

Table with 3 columns: Test Step, Result, and Time. Rows include Operational System Check, Air Blank, Cal Verification, Solution Temp., and Subject Results 1 and 2.

Test Complete 05/23/2015

Operator Signature: Larry Jordan

Fifteen minute waiting period completed - YES

Operator Name: JORDAN, LAWRENCE JACOB

Certificate Number: 01004

All air blank results must be 0.000.
Subject results 1 and 2 must not differ by more than 0.020 g/210L.
Calibration verification results acceptable range: 0.070 - 0.090 g/210L
Reference sample solution temperature acceptable range: 33.80 - 34.20°C



Preparer

Heather Greco
Quality Assurance Specialist

Date: 9/24/2015

Concurrence

Forrest W. Davis
Quality Assurance Coordinator

Date: 9/24/2015

Version #	Effective Date	Brief Description of Change(s)
00	10/01/2015	Original Issue



ETHANOL

WHAT IS ETHANOL?

Ethanol is classified as an alcohol. At room temperature ethanol is a clear, colorless liquid that has a slight odor and mixes completely with water. Ethanol is the type of alcohol found in alcoholic beverages. It is also referred to as ethyl alcohol, grain alcohol, spirits, or simply alcohol. Ethanol can be found in many different products such as solvents, antiseptics, fuels, medications, and mouthwashes. The terms alcohol, ethyl alcohol, and ethanol can be used interchangeably. Regardless of the term used, ethanol is a drug that affects human behavior and performance.

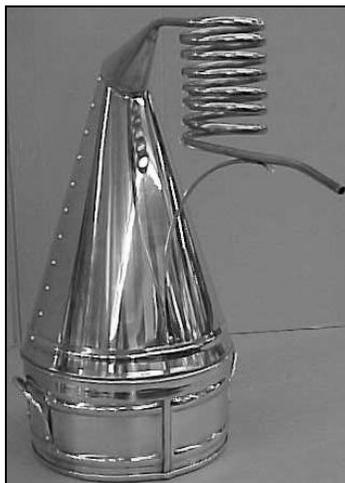


There are many different types of alcohol and each has a unique molecular structure with specific chemical properties. Two other common alcohols are methanol (methyl alcohol) and isopropanol (isopropyl alcohol). All alcohols are toxic. Consumption of even small amounts of methyl alcohol or isopropyl alcohol can have life threatening implications. Although still toxic, ethyl alcohol is not as toxic as other alcohols.

ALCOHOLIC BEVERAGES

Alcohol can be produced by various methods. By law, production of alcoholic beverages always begins with the process of *fermentation*. Fermentation is the procedure by which yeast consume sugar or starch, and in turn, excrete ethanol. Beer and wine are produced through this process. The maximum alcohol concentration produced by this method is about 12-15% because any higher alcohol concentration kills the yeast.

In order to manufacture a beverage with a higher alcohol content, such as rum, vodka, gin, or whiskey, the alcohol mixture produced from fermentation must be distilled.



Distillation is a method of separating and collecting the ethanol from other compounds in a mixture. This process concentrates the ethanol so that the final product has a concentration higher than the original fermented mixture. Depending on the fermented mixture used, the aging process, and type of flavorings added, different types of alcoholic beverages are produced.





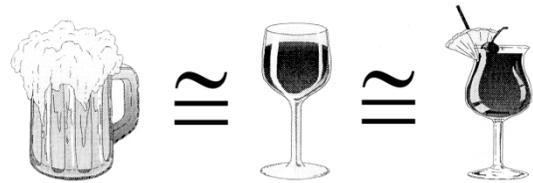
HOW ALCOHOL IS MEASURED

In the United States, the ethanol concentration of distilled beverages is designated by the proof system. Proof is twice the percentage of the alcohol content by volume. For example, 80 proof alcohol contains 40% alcohol by volume. 50% alcohol is equal to 100 proof.

$$\text{Proof} = 2 \times \% \text{ Alcohol by Volume}$$

The alcohol content of beer and wine are usually reported in terms of percent volume of alcohol. Most beers have less than 5% alcohol by volume and wines typically have about 10-12% alcohol by volume.

The alcohol content varies depending on the drink. For this course, one "drink" equals one 12 ounce serving of regular beer, 5 ounces of wine or one and a quarter ounces of 80 proof distilled spirits. Each of these drinks contains approximately the same amount of alcohol. If any one of these is consumed in the same period of time, it will have about the same effect upon the body.



FATE OF ALCOHOL IN THE BODY

Ethanol can be considered a food, a drug, or a poison for the following reasons:

- It's a *food* because the body uses it to produce energy.
- It's a *drug* because of its *depressant* effect upon the central nervous system.
- It's a *poison* because even small amounts damage and irritate tissue. Larger doses can cause coma and death.

ABSORPTION

The most common way to get ethanol into the body is by ingestion via the mouth. The absorption of ethanol begins immediately following the introduction of the alcoholic beverage into the digestive system. It travels down the esophagus and into the stomach. It then passes through the **pyloric sphincter** (valve between the stomach and small intestine) and into the small intestine. Ethanol is readily absorbed through all mucosal surfaces, including the oral cavity and gastrointestinal tract. **Ethanol is not digested, rather absorbed by simple diffusion across the mucous membranes.** Some alcohol is absorbed in the stomach, but the majority of the ethanol is absorbed in the **small intestine.**



Immediately after a sip of an alcoholic beverage, the breath would indicate a high alcohol concentration. This is sometimes referred to as *residual alcohol* or mouth alcohol. If analyzed, this breath sample would not be an accurate reflection of the alcohol concentration in a person's body.

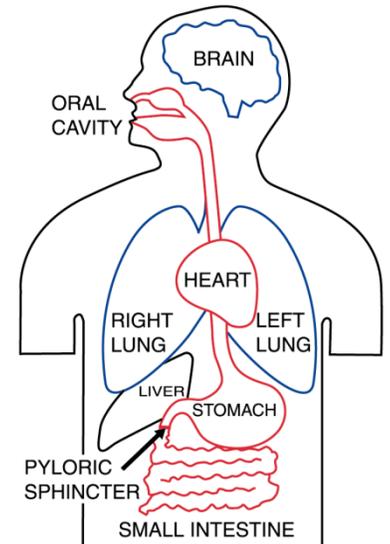


Ethanol

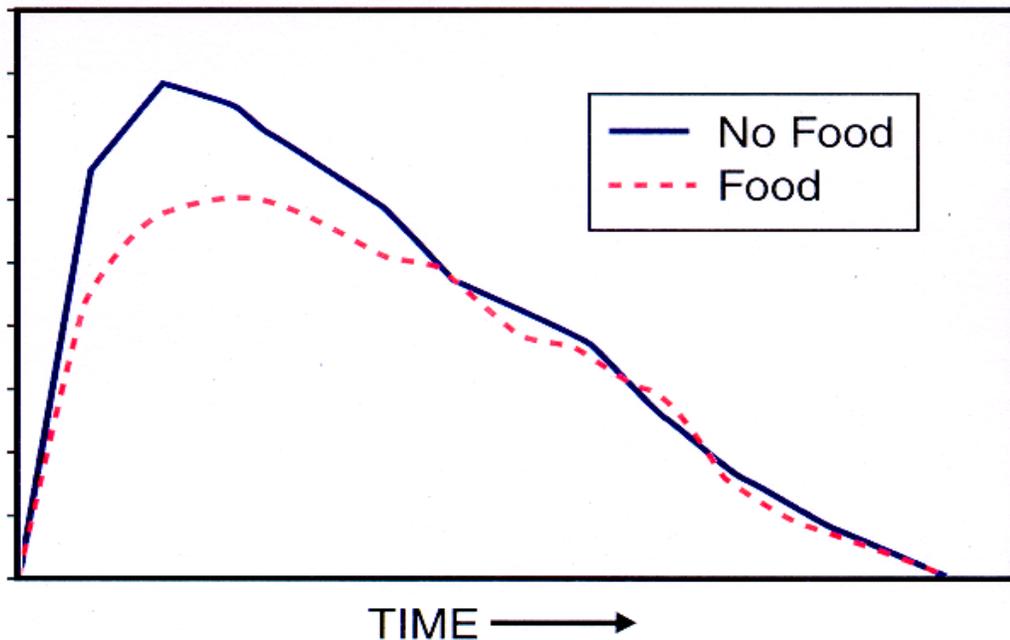
Residual alcohol diminishes rapidly and disappears in less than **15 minutes**. Proper testing procedures combined with current evidential breath alcohol testing instrumentation eliminate residual alcohol from affecting the test result.

The length of time that ethanol remains in the stomach can vary due to several factors such as the presence of food in the stomach and stomach emptying. The most significant factor to affect absorption is the amount of food in the stomach. **Food delays the emptying of the stomach, causing ethanol to remain in the stomach for a longer period of time. This results in slower absorption of ethanol.** Slowing the alcohol absorption decreases the peak alcohol concentration, may prolong the time to reach the peak concentration, and reduces the impact of that alcohol on the person.

The type of food may affect the absorption rate, but the amount of food is the most significant factor. Even on a full stomach, the peak alcohol concentration is usually reached within 30 to 40 minutes after the last drink.



Absorption Rate: Empty vs. Full Stomach

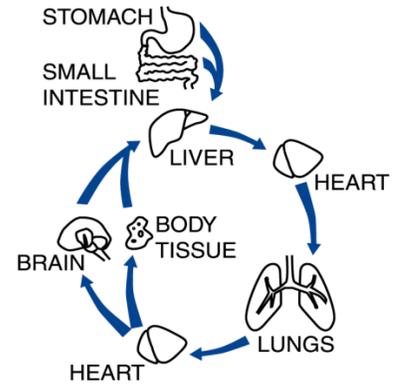




Ethanol

DISTRIBUTION

Once absorbed, ethanol travels through the liver and is distributed throughout the body. Some of the ethanol quickly reaches the brain. The water content of organs and tissues determines the amount of alcohol absorbed in those locations. Since ethanol mixes with water, it will move from an area of high ethanol content to an area of low ethanol content.

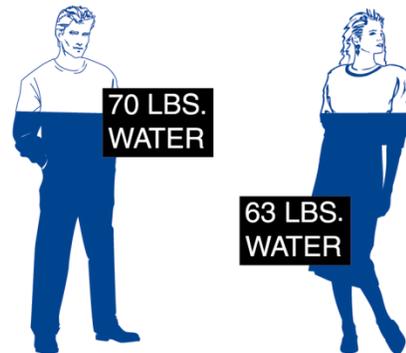
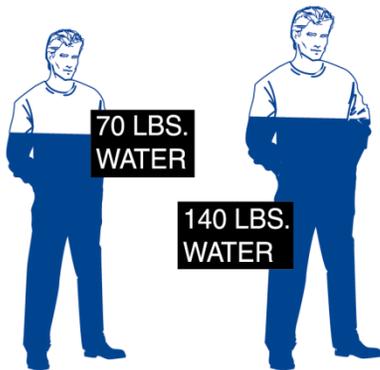


BODY TYPE AND TOTAL BODY WATER

The total amount of water in the body can vary from one individual to another based upon the weight of the person.

Assuming the same body type, a 200 pound man must consume more ethanol than a 100 pound man to reach the same alcohol concentration. This is because the 200 pound man has more body water to dilute the alcohol.

The amount of fat tissue also affects the total amount of body water. Since fat tissue has very little water it does not absorb ethyl alcohol. A 200 pound obese person will have less body water to dilute the alcohol, than a 200 pound lean person. Total body water tends to decrease with age.



WEIGHT = 100 LBS. WEIGHT = 100 LBS.

GENDER DIFFERENCE

In general, women have a higher percentage of body fat and a lower percentage of body water. If a man and woman of the same weight and body build ingest the same amount of alcohol, the woman will most likely achieve a higher alcohol concentration.

THE ELIMINATION PROCESS

Ethanol is removed from the body through metabolism and excretion. The majority of ethanol is metabolized (oxidized) by the liver. A small amount of alcohol can be eliminated in the gastrointestinal tract, particularly the stomach. A small portion is also excreted through urine, sweat and breath.

An individual's rate of metabolism is fairly constant, but the elimination rate can vary from person to person. The range of reported elimination rates varies from about 0.01-0.03 g/210 L per hour. The higher rates usually occur in alcohol abusers or alcohol dependent persons. Hot coffee, a cold shower, or vigorous exercise cannot change the rate of elimination. The body needs a sufficient amount of time to metabolize and excrete the ethanol that was consumed.



Ethanol

The elimination of ethanol in the breath is the basis for the forensic breath alcohol test. The exchange of oxygen and carbon dioxide occurs in the small tissue sacs of the lungs called the *alveoli*. A portion of the alcohol will be eliminated in the breath because the ethanol can readily pass through the thin alveolar membrane and be exhaled in the breath. The concentration of alcohol in the breath is proportional to the amount of ethanol in the body.

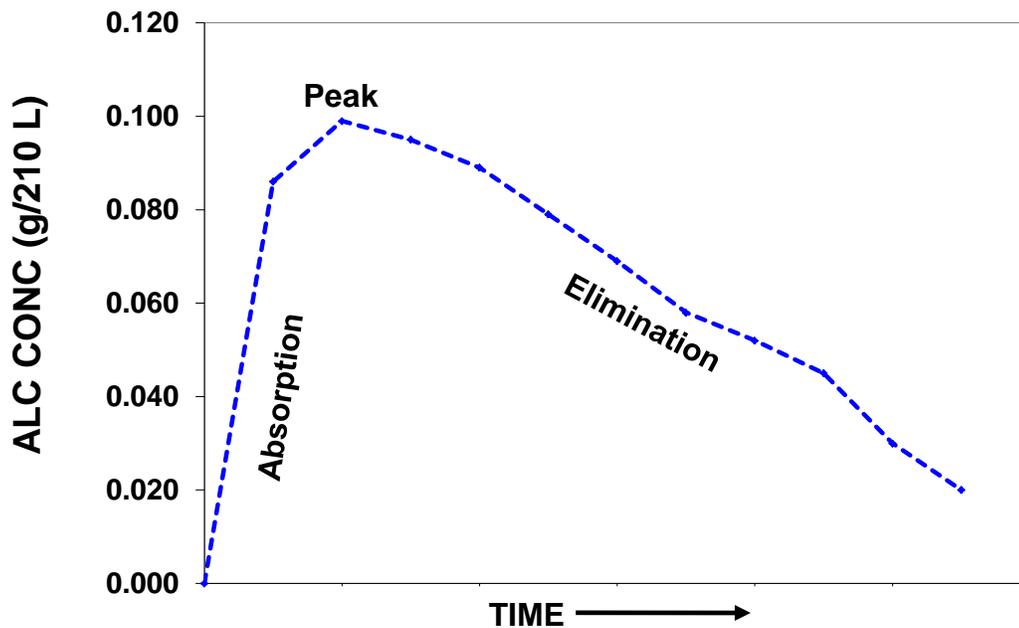
PUTTING IT ALL TOGETHER

Absorption of ethanol begins almost immediately after ingestion and elimination of ethanol begins soon thereafter. When the rate of absorption exceeds the rate of elimination, the alcohol concentration will increase. Ethanol concentration decreases when elimination exceeds absorption. Peak alcohol concentration occurs when the amount of alcohol being absorbed equals the amount being eliminated.

SCIENTIFICALLY ESTIMATING ALCOHOL CONCENTRATION

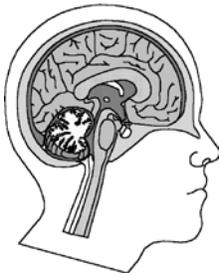
Technical Supervisors are asked to estimate a person’s alcohol concentration at the time of driving. There are three possibilities when scientifically estimating the alcohol concentration at a time prior to the test. The alcohol concentration could be higher, the same, or lower, depending upon where the individual is on the alcohol concentration curve (absorption, peak or elimination). When scientifically estimating an individual’s alcohol concentration at a time prior to the test, the most useful piece of information to consider is when the individual last consumed alcohol. Research indicates that the alcohol concentration at the time of the test is usually lower or the same compared to the time of driving.

THEORETICAL ALCOHOL CONCENTRATION CURVE





THE CENTRAL NERVOUS SYSTEM (CNS)



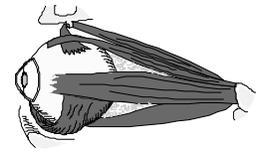
Ethanol is a CNS *depressant*. It depresses nerve transmission and reduces coordination between various nerve centers.

Alcohol affects the brain in the reverse order of how brain functions develop. For example, higher level brain functions, such as judgment, logic, and reason, are affected first. The lower involuntary brain functions, such as respiration and digestion, are affected last.

Research support by the National Safety Council and the American Medical Association has demonstrated that impairment of important driving skills can occur at ethanol concentrations well below 0.08 g/210 L. Some of the effects alcohol can have on driving skills are:

Judgment Impairment of judgement begins at relatively low alcohol concentrations. As inhibitions are reduced, risky and unsafe behavior increases and may be manifested through poor decision making and improper choices.

Vision Ethanol depresses the coordination between the muscles that control the eyes. This lack of muscle coordination leads to blurring and double vision. Intoxicated individuals tend to narrow their visual field. Ethanol decreases the field of peripheral vision so drivers fail to perceive important peripheral events. Impairment of vision has been measured at extremely low alcohol concentrations.



Divided Attention The ability to divide attention between two or more sources of information is a basic requirement of safe driving. Steering an automobile is an example of a relatively difficult divided attention task. The driver must maintain the vehicle within the lane limits and in the correct direction, while monitoring the driving environment for other important information. The driver must be aware of the presence of other vehicles, traffic signals, and pedestrians. Because these tasks must be performed at the same time, they require the division of attention. Research has shown that the divided attention task is sensitive to the effects of alcohol.



Psychomotor Skills Psychomotor skills demonstrate the relationship between mental functions and physical movement. The degree of impairment demonstrated by roadside tests, such as walking and balancing, can depend on the drinking experience of the driver.

Perception The ability to interpret complex sensory information can be adversely affected by ethanol.

Information Processing Ethanol slows the rate of information processing by the CNS. If there are two or more stimuli and if several responses are possible, response times lengthen significantly and the likelihood of an incorrect response increases. Alcohol impaired drivers require more time to recognize and respond to traffic signals.



Even small amounts of alcohol can affect a person's ability to drive. The only safe advice is to avoid drinking any alcohol if you are driving.



ETHANOL & TOLERANCE

Tolerance to alcohol occurs when a larger amount must be consumed in order to produce the same effect. Inexperienced drinkers generally have less tolerance to the effects of alcohol than more experienced drinkers. That is why inexperienced drinkers often look and act more intoxicated than experienced drinkers who have the same alcohol concentration.

Most people can increase their tolerance to the effects of alcohol by repeated drinking. People who reduce the amount of alcohol they drink usually see their tolerance to the effects of alcohol decrease. This is similar to weight lifting. When people lift weights regularly, they are able to increase the amount of weight they can lift. If they significantly decrease or stop lifting weights, the amount of weight they can lift is reduced. Drinkers with a high tolerance to the effects of alcohol may appear normal and show few obvious signs of intoxication. This is due partly to learned behavior and physical changes in their bodies that result from repeated consumption of alcohol.

In 1919, Dr. Edward Mellanby was the first scientist to publish a study that concluded a person is more impaired at a given alcohol concentration when their alcohol concentration is increasing than when it is decreasing. Simply stated, the “Mellanby Effect” explains why people feel more intoxicated when their alcohol concentration is rising than when it is falling.

Because of the many aspects of alcohol tolerance, judging a person’s intoxication can be very difficult based only on how they appear. It is the loss of their normal physical and mental faculties that is the most critical. A person may try to hide their intoxication, but this cannot change the fact that their judgment, vision, reactions and coordination are impaired. Regardless of a person’s tolerance to the effects of alcohol, everyone with an alcohol concentration of 0.08 is too impaired to drive safely.

ALCOHOL AND OTHER DRUGS

Combining ethanol with other drugs can produce two types of effects: additive or synergistic. When one dose of a drug is combined with one dose of ethanol and the effect is equal to no more than the sum of the effects of the two drugs, the effect is said to be additive. A synergistic situation occurs when a drug is combined with ethanol and the end result is greater than the sum of the individual effects.

When ethanol is consumed along with other drugs, the symptoms of alcohol intoxication may be altered. This may explain the situation where an individual appears very intoxicated, but the alcohol test results are low.



IMPAIRMENT WITHOUT ETHANOL

Certain illnesses, diseases, or other drugs are able to produce symptoms similar to ethanol intoxication. Untreated diabetics or trauma victims may exhibit symptoms similar to ethanol intoxication.

Acetone, like ethanol, can cause impairment and may be mistaken for alcohol intoxication. Acetone can be present in an individual due to a prolonged fast, a low carbohydrate diet, or untreated diabetes. Modern evidential breath alcohol testing instruments can distinguish between acetone and ethyl alcohol, eliminating the possibility of acetone affecting the alcohol result.



Ethanol

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Date: 9/24/2015

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Date: 9/24/2015

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RENEWAL OF CURRENT CERTIFICATION

The renewal procedure for a **currently** certified breath test Operator is covered in §19.4 of the Breath Alcohol Testing Regulations. All Operator Certificates expire after October 31st of each year. **An Operator must have completed all of the requirements for certification renewal prior to November 1st.** If all the requirements for certification are met, the Operator's certificate will be renewed until October 31st of the following year. Annual Renewal requirements are:

Every year:

Each Operator must properly complete at least five subject and/or practice tests before November 1st. Any combination of properly completed subject and/or practice tests will meet the yearly requirement.

During years that end in an odd number:

In addition to the annual requirements, Operators must successfully complete a renewal course and pass a written exam. Course details and dates will be determined by the Technical Supervisor. The Operator is responsible for obtaining the training schedule. **Failure to complete the renewal course and/or pass the written examination will result in inactivation of certification.**



Recommendations for meeting the certification renewal requirements:

- **You do not have to wait until September and October to run tests.** Any complete subject and/or practice tests conducted between last issuance of certification and its expiration (typically from November 1st until October 31st of the following year) will be counted towards certification renewal.
- **If you have any questions, contact your Technical Supervisor.**



Renewal of Current Certification

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TEXAS BREATH ALCOHOL TESTING REGULATIONS



**TEXAS DEPARTMENT OF PUBLIC SAFETY
AUSTIN, TEXAS**

Texas Administrative Code
Title 37 Public Safety and Corrections
Part 1 Texas Department of Public Safety
Chapter 19 Breath Alcohol Testing Regulations
Subchapter A Breath Alcohol Testing Regulations

RULE §19.1 Definitions

The following words and phrases, when used in this chapter, shall have the meanings as detailed in this section, unless the context shall clearly indicate otherwise.

- (1) Alcohol--Ethyl alcohol, sometimes referred to as grain alcohol or ethanol.
- (2) Approval--Meeting and maintaining the requirements set forth in this subchapter for approval.
- (3) Approved course of instruction--A school, college, agency, institution, or laboratory meeting the requirements stated in §19.6 of this title (relating to Approval of Courses of Instruction).
- (4) Breath alcohol test (breath alcohol analysis)--The analysis of a subject's breath specimen(s) to determine the alcohol concentration(s) thereof.
- (5) Certification--Meeting and maintaining the requirements set forth in this subchapter for certification.
- (6) Certified operator--An individual meeting and maintaining the requirements stated in §19.4 of this title (relating to Operator Certification).
- (7) Conviction--An adjudicated verdict of guilty or an order of deferred adjudication by a court of competent jurisdiction.
- (8) Department--The unmodified word "department" in this subchapter refers to the Texas Department of Public Safety.
- (9) Inactivation--The voluntary or temporary discontinuance of certification.
- (10) Instrument(s)--The device(s) which measure or quantitate the breath alcohol concentration pursuant to §19.2 of this title (relating to Instrument Certification).
- (11) Office of the Scientific Director (OSD)--The scientific director and his staff.
- (12) Proficiency test--A method of evaluation at the direction of a technical supervisor or designated representative of the scientific director by which the knowledge, skills, and abilities of an operator to operate breath alcohol testing equipment can be assessed.
- (13) Public information and demonstration--The public display and exhibition of certified evidential breath testing equipment.
- (14) Recertification--A process to make certification current.
- (15) Reference system--The equipment designed to input any combination of reference material(s) or standard(s) with a known quantity into an instrument for analysis as a measurement standard.
- (16) Renewal of current certification--The continuance of active certification by meeting the requirements stated in §19.4(b) of this title (relating to Operator Certification).
- (17) Reports and records--The data and documents pertinent to this subchapter.

(18) Scientific director--The individual or his designee responsible for the implementation, administration and enforcement of the Texas breath alcohol testing regulations.

(19) Security--The safeguard of certified instruments at testing locations.

(20) Site location--The physical site of the breath alcohol testing instrument and associated equipment.

(21) Suspension--The termination or revocation of certification.

(22) Technical supervisor and technical supervision--An individual meeting the minimum requirements set forth in §19.5 of this title (relating to Technical Supervisor Certification) and the responsibilities of such.

RULE §19.2 Instrument Certification

(a) The Office of the Scientific Director, Breath Alcohol Testing Program, Texas Department of Public Safety (hereinafter referred to as the scientific director) shall approve and certify all breath alcohol testing instruments to be used for evidential purposes.

(1) The scientific director will establish and maintain a list of approved instruments by manufacturer brand or model designation for use in the state.

(2) A manufacturer or designated representative desiring approval of an instrument not on the approved list may submit an instrument to the scientific director. Examination and evaluation of the instrument to determine if it meets the criteria for approval or certification as an evidential instrument will be done at the discretion of the scientific director. Costs associated with such a submission will be done at the expense of the submitting entity.

(b) In order to be approved each instrument must meet the criteria as detailed in this subsection:

(1) Expired breath specimens shall be analyzed.

(2) The instrument shall incorporate a reference system, the result of which must agree within plus or minus 0.01g/210L of the nominal value or such limits as set by the scientific director.

(3) The specificity of the procedure shall be adequate and appropriate for the analyses of breath specimens for the determination of alcohol concentration for law enforcement.

(4) Any other tests deemed necessary by the scientific director to correctly and adequately evaluate the instrument to give correct results in routine breath alcohol testing and be practical and reliable for law enforcement purposes.

(c) Upon proof of compliance with subsection (b) of this section the instrument will be placed on the list of approved instruments.

(1) Inclusion on the scientific director's list of approved instruments will verify that the instrument by manufacturer brand or model designation meets the criteria of subsection (b) of this section.

(2) The scientific director may, for cause, rescind approval of and remove an instrument by manufacturer brand or model designation from the approved list.

(d) The technical supervisor shall determine if a specific instrument by serial number is of the same manufacturer brand or model designation as is shown on the scientific director's approved list and meets the criteria for certification as stated in subsection

(b)(2) of this section and when required, shall provide direct testimony or affidavit of this information.

(e) The scientific director, or a designated representative or technical supervisor, may, for cause, remove a specific instrument by serial number from evidential testing and withdraw certification thereof.

(f) Certified evidential instruments should not ordinarily be used for public information programs. Individuals with appropriate breath alcohol testing technical expertise, such as a certified technical supervisor, should disseminate this type of public information.

RULE §19.3 Techniques and Methods

(a) All breath alcohol testing techniques and methods shall meet, but not be limited to, the requirements as detailed in this subsection:

(1) a period during which an operator is required to remain in the presence of the subject. An operator shall remain in the continuous presence of the subject at least 15 minutes immediately before the test and should exercise reasonable care to ensure that the subject does not place any substances in the mouth. Direct observation is not necessary to ensure the accuracy of the test result;

(2) the breath alcohol testing instrument must be operated by a certified operator or technical supervisor and only certified personnel will have access to the instrument;

(3) a reference system used in conjunction with subject analysis, the results of which must agree with the nominal value within plus or minus 0.01g/210 L, or such limits as set by the scientific director;

(4) all analytical results shall be expressed in grams of alcohol per 210 liters of breath (g/210 L);

(5) maintenance of any specified records designated by the scientific director;

(6) supervision of certified operators and testing techniques by a technical supervisor meeting the qualifications set forth in §19.5 of this title (relating to Technical Supervisor Certification);

(7) designation that the instrumentation will be used only:

(A) for testing subjects suspected of violating any statute or codified rule that defines intoxication in terms of alcohol concentration; and

(B) in compliance with §19.4(b), (c), and (e) of this title (relating to Operator Certification).

(b) The scientific director or a designated representative may at any time make an inspection of an evidential breath alcohol testing facility or technical supervisor laboratory to ensure compliance with this subchapter.

(c) Technical supervisors, when required, shall provide expert testimony by direct testimony or by affidavit concerning the approval of techniques and methods under their supervision.

RULE §19.4 Operator Certification

(a) Certification.

(1) Prior to certification an applicant must establish proof of association, or pending association with: a law enforcement agency, or a laboratory, actively engaged in evidential breath alcohol testing, or a certified school of instruction in Texas or proof of pending association upon receipt of certification.

(2) Conviction history:

(A) persons convicted of a felony or a Class A misdemeanor shall not be eligible to be a certified operator;

(B) persons convicted of a Class B misdemeanor within the last 10 years shall not be eligible to be a certified operator;

(C) persons receiving a driver license suspension or a denial to issue a driver license for refusal to submit to the taking of a specimen per the provisions of Texas Transportation Code, Chapter 724 or Chapter 522 within the last 5 years shall not be eligible to be a certified operator.

(3) Prior to initial certification as a breath test operator, an applicant must successfully complete a course of instruction meeting the criteria set forth in §19.6 of this title (relating to Approval of Courses of Instruction).

(4) Prior to certification as an operator of a breath alcohol testing instrument, an applicant must satisfactorily meet the criteria, set forth by the scientific director or a designated representative, as detailed in this paragraph:

(A) a written examination;

(B) establish competency in the operation of the instrument on which the operator is to be certified and the proper completion of all required reports and records;

(C) failure of the written examination and/or failure to establish competency in the operation of the instrument will cause the applicant to be ineligible for reexamination for a period of 30 days. A subsequent failure of either criteria will require that the candidate attend and satisfactorily complete the initial course of instruction for certification of a breath test operator.

(5) Upon successful completion of the requirements for certification, the scientific director will issue the individual an operator certificate for a period of time designated by the scientific director or until the next examination for renewal unless inactivated or suspended.

(6) If an operator is certified to operate a specific brand and/or model of equipment and is required to be certified on an additional brand and/or model of equipment, the scientific director may waive portions of this section and only require instruction needed to acquaint the applicant with proper operation of the new brand and/or model of equipment.

(b) Renewal of current certification. In order to maintain current certification, the operator is required to renew certification prior to its expiration date. The minimum requirement for renewal of operator certification will be:

(1) The proper completion of any combination of five subject and/or practice tests as defined in the Texas Breath Alcohol Testing Program Operator Manual since the last issuance of an operator certificate per the provisions of subsection (a)(5) or (b)(5) of this section.

(2) The satisfactory biennial completion of a course of instruction, the contents of which should include, but not be limited to, topics such as:

(A) a brief review of the theory and operation of the breath alcohol test equipment;

(B) a detailed review of the breath alcohol analysis and reporting procedures;

(C) a review of procedural updates resulting from recent court decisions and legislation;

(D) a review of current issues in the field of breath alcohol testing;

(E) a written examination

(3) Renewal of certification will be denied and current certification will be inactivated in accordance with subsection (d) of this section when the operator:

(A) fails to properly complete a minimum of five tests in accordance with subsection (b)(1) of this section; or

(B) fails the written examination.

(4) An operator who fails renewal will be given the reason for failure and is not eligible to be reexamined for a period of 30 days. Reexamination will be pursuant to subsection (a)(4) of this section. A resulting failure will require that the operator attend and satisfactorily complete the initial course of instruction for certification of a breath test operator in order to regain current certification.

(5) Upon successful completion of the requirements for renewal of certification, the scientific director will issue the individual an operator certificate for a period of time designated by the scientific director or until next examination for renewal unless inactivated or suspended.

(c) Proficiency requirements.

(1) The scientific director, or a designated representative, or the operator's technical supervisor may at any time require an operator to demonstrate proficiency in the proper operation of the instrument and analysis reporting procedures.

(2) It is the responsibility of the operator to maintain proficiency.

(3) Failure to pass a proficiency test will result in the suspension of the operator's certification for 30 days.

(d) Certification inactivation and suspension.

(1) Inactivation may be initiated by the certified operator in case of voluntary surrender of certification or by anyone with the authority to suspend. The technical supervisor or operator shall, without delay, notify the office of the scientific director of any such inactivation. Challenges to involuntary inactivation will be resolved at the discretion of the scientific director. Inactivation will be utilized, but is not limited to, as provided in this paragraph:

(A) an operator transfers to a position where certification as a breath test operator is no longer desired;

(B) an operator fails to renew certification prior to its expiration;

(C) an operator terminates employment under which certification was acquired; or

(D) administrative program control to safeguard the scientific integrity of the breath alcohol testing program.

(2) Suspension of certification will be utilized when the scientific director and/or a technical supervisor determines an operator intentionally or purposefully disregards or violates these regulations, or commits a violation of law relating to breath testing, or falsely or deceitfully obtains certification, or for malfeasance or noncompliance with any provision of these regulations, or when in the technical supervisor's judgment the operator's performance is unreliable or the operator is incompetent.

(A) The technical supervisor shall, without delay, notify the scientific director in writing of any such suspension and furnish a copy of such notice to the suspended operator and the operator's appropriate supervisor or department head. The suspended operator shall not be permitted to operate the instrument until such time as certification has been restored pursuant to subsection (e) of this section.

(B) Upon receipt of the notification of suspension, the scientific director shall initiate, if not previously completed, an inquiry culminating in sustaining the suspension or setting aside the suspension.

(C) The minimum period of suspension as determined by the scientific director will be for a period of time not less than 30 days. The technical supervisor or a designated representative of the scientific director may recommend a specific period of suspension to the scientific director.

(D) Due to the immediate nature and the procedure for appeal, the individual initiating the suspension shall not be required to confer, consult, or obtain permission or approval from anyone prior to the initiation of the suspension. However, all suspensions must be consistent with procedures outlined in this subchapter.

(3) An operator whose certification has been suspended may appeal such action in writing to the assistant director of the major division responsible for crime laboratory activities, Texas Department of Public Safety, who will determine if the action of the scientific director will be affirmed or set aside. The assistant director may reinstate the certification under such conditions as deemed necessary and notify the scientific director in writing.

(e) Recertification. Certification that has been inactivated or suspended must be regained before evidential analyses may be administered. Recertification shall take place as detailed in this subsection:

(1) recertification after inactivation for the failure to complete the renewal process prior to the expiration of current certification will be pursuant to subsection (a)(4) of this section;

(2) recertification after inactivation or suspension will be pursuant to subsection (a)(4) of this section;

(3) recertification after a change in instrumentation or testing methodologies will be at the discretion of the scientific director, will be pursuant to subsection (a)(6) of this section.

(f) Certificate. The issuance of a certificate to the breath test operator shall be evidence that the operator has met the requirements for initial certification and/or renewal of certification.

(g) Verification. The technical supervisor, when required, shall verify all aspects of operator certification, by direct testimony or by affidavit.

RULE §19.5 Technical Supervisor Certification

(a) The primary function of the technical supervisor is to provide the technical, administrative and supervisory expertise in safeguarding the scientific integrity of the breath alcohol testing program and to ensure the breath alcohol testing program's acceptability for evidential purposes. The technical supervisor, in matters pertaining to breath alcohol testing, is the field agent of the scientific director. Supervision by the technical supervisor in accordance with the provisions stated in these regulations shall include, but not be limited to:

(1) supervision of certified operators in performance of breath alcohol test operations, including the proper completion of forms and records, and operator's compliance with the provisions stated in these regulations;

(2) supervision of certified instrumentation and affiliated equipment;

- (3) supervision of data gathered for initial certification and/or approval of individual instruments;
- (4) supervision of techniques and methods, maintaining scientific integrity and upholding these regulations;
- (5) selection and supervision of a site location as it applies to security and technical suitability for testing;
- (6) supervision of compliance with the policy of public information and/or demonstrations of breath alcohol testing instruments and equipment;
- (7) all technical, administrative and regulatory aspects of breath alcohol testing; and
- (8) expert testimony by direct testimony or by affidavit concerning all aspects of breath alcohol testing.

(b) The minimum qualifications for certification as a technical supervisor are:

(1) a baccalaureate degree from an accredited college or university with a major in chemistry, or as an alternative, a major in another scientific field with sufficient semester hours in chemistry or other qualifications as determined by the scientific director (for the purposes of these regulations, sufficient hours in chemistry shall be defined as successful completion of the equivalent of a minimum of 18 semester hours of chemistry, no more than 8 of which may be freshman level.);

(2) satisfactory completion of a course of instruction as set forth in §19.4(a)(3) of this title (relating to Operator Certification);

(3) satisfactory completion of technical supervisor training approved by the scientific director, including, but not limited to:

(A) advanced survey of current information concerning alcohol and its effects on the human body;

(B) operational principles and theories applicable to the program;

(C) instrument operations, maintenance, repair and calibration;

(D) legal aspects of breath alcohol analysis;

(E) principles of instruction;

(4) knowledge and understanding of the scientific theory and principles as to the operation of the instrument and associated equipment;

(5) prior to certification, a technical supervisor candidate must establish proof of association or pending association with an agency of laboratory actively engaged in evidential breath alcohol testing or with a course of instruction as set forth in §19.6 of this title (relating to Approval of Course of Instruction) upon receipt of certification. If the technical supervisor candidate or certified technical supervisor cannot establish such proof of association, certification will, at the discretion of the scientific director, be denied or inactivated;

(6) Conviction history:

(A) persons convicted of a felony or a Class A misdemeanor shall not be eligible to be a certified technical supervisor;

(B) persons convicted of a Class B misdemeanor within the last 10 years shall not be eligible to be a certified technical supervisor;

(C) persons receiving a driver license suspension or a denial to issue a driver license for refusal to submit to the taking of a specimen per the provisions of Texas Transportation Code, Chapter 724 or Chapter 522 within the last 5 years shall not be eligible to be a certified technical supervisor.

(c) Certification.

(1) Upon satisfactory proof to the scientific director by the applicant that the minimum qualifications set forth in subsection (b) of this section have been met, the scientific director will issue certification for a period of time designated by the scientific director unless inactivated or suspended.

(2) A certified technical supervisor is fully authorized to conduct evidential subject tests and is not required to maintain a separate certification as a breath test operator as set forth in §19.4 of this title (relating to Operator Certification).

(3) Technical supervisor certification may be voluntarily inactivated when it is no longer needed or inactivated at the discretion of the scientific director if the technical supervisor is no longer associated with an agency or laboratory actively engaged in evidential breath alcohol testing and/or with a course of instruction as set forth in §19.6 of this title (relating to Approval of Course of Instruction).

(4) Technical supervisor certification may be suspended only by the scientific director for malfeasance, incompetence, falsely or deceitfully obtaining certification, or failure to carry out the responsibilities set forth in this subchapter.

(5) A technical supervisor whose certification has been suspended may appeal such action in writing to the assistant director of the major division responsible for crime laboratory activities, Texas Department of Public Safety, who will decide whether the action of the scientific director will be affirmed or set aside. The assistant director may reinstate certification of the technical supervisor making such appeal under such conditions deemed necessary and notify the scientific director in writing.

(d) Certificate. The issuance of a certificate to the technical supervisor shall be evidence that the technical supervisor has met the requirements for certification.

(e) Renewal of current certification and recertification. In order to maintain current certification, the technical supervisor is required to renew certification prior to its expiration. The scientific director shall determine the minimum requirement for renewal of technical supervisor certification and for recertification after inactivation or suspension.

RULE §19.6 Approval of Courses of Instruction

(a) Any agency, laboratory, institution, school or college intending to offer a course of instruction for certified operators of evidential breath alcohol testing instruments, must have the course curriculum approved by the scientific director.

(b) The operator course must utilize the most current revision of the Texas Breath Alcohol Testing Program Operator Manual as the primary instructional text and contain, as a minimum, these areas of instruction:

(1) the effects of alcohol on the human body;
(2) the operational principles of the breath alcohol testing instrument to be used, including:

- (A) a functional description of the testing method; and
- (B) a detailed operational description of the method with demonstrations.

(3) legal aspects of breath alcohol testing;
(4) supplemental information which is to include nomenclature appropriate to the field of breath alcohol testing;

(5) participation in a laboratory setting operating the breath testing equipment. Laboratory practice will include the analysis of reference samples, as well as the analysis of breath samples from actual drinking subjects and completion of all required records and reports needed for documentation.

(c) Each course of instruction shall be coordinated by, or under the general direction or supervision of, a certified technical supervisor.

(d) All courses of instruction will be open to the scientific director or designated representative for inspection thereof.

(e) Upon satisfactory proof of compliance of subsections (a) - (d) of this section to the scientific director, the scientific director will approve the course of instruction and its participants will be eligible to apply for operator certification.

(f) Prior to commencing the course, it will be the responsibility of the teaching agency to make arrangements with the office of the scientific director for the administration of examinations.

(g) Prior to the administration of the examination by the scientific director, it shall be the responsibility of the course of instruction coordinator(s) to provide proof that all students attending the course of instruction have been authorized and approved by the technical supervisor responsible for the technical supervision of the operator upon certification. Failure to provide this authorization will delay the administration of the examination and/or certification until such time as proof of authorization can be documented.

(h) Examinations for operator certification after completion of a course will be in accordance with §19.4(a)(4) of this title (relating to Operator Certification).

(i) Failure to maintain the provisions stated in this section will be cause for the scientific director to rescind approval of a course of instruction.

RULE §19.7 Revisions

The changes which are adopted with the revision of these regulations apply only to breath tests that are done after the date of this revision. Previous revisions of these regulations are not nullified and nothing herein should be construed as limiting or canceling the effect of old regulations on tests done under these previous regulations.