

Title 448 WAC

STATE TOXICOLOGIST

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Chapter 448-14 WAC

STATE TOXICOLOGIST STANDARDS FOR ANALYSIS OF BLOOD SAMPLES FOR ALCOHOL

WAC

- 448-14-010 Criteria for approved methods of quantitative analysis of blood samples for alcohol.
 448-14-020 Operational discipline of blood samples for alcohol.
 448-14-030 Qualifications for a blood alcohol analyst.

WAC 448-14-010 Criteria for approved methods of quantitative analysis of blood samples for alcohol. Any quantitative blood alcohol analysis method which meets the following criteria is approved by the state toxicologist and may be used in the state of Washington. Analysis of urine for estimation of blood alcohol concentrations is not approved by the state toxicologist in the state of Washington.

The blood analysis procedure should have the following capabilities:

(1) Precision and accuracy.

(a) The method will be capable of replicate analyses by an analyst under identical test conditions so that consecutive test results on the same date agree with a difference which is not more than 3% of the mean value of the tests. This criterion is to be applied to blood alcohol levels of 0.08 grams of alcohol per 100 mL and higher.

(b) Except for gas chromatography, the method should be calibrated with water solutions of ethyl alcohol, the strength of which should be determined by an oxidimetric method which employs a primary standard, such as United States National Bureau of Standards potassium dichromate.

(c) The method will give a test result which is always less than 0.005 grams of alcohol per 100 mL when alcohol-free living subjects are tested.

(2) Specificity.

(a) On living subjects, the method should be free from interferences native to the sample, such as therapeutics and preservatives; or the oxidizable material which is being measured by the reaction should be identified by qualitative test.

(b) Blood alcohol results on post-mortem samples should not be reported unless the oxidizable substance is identified as ethanol by qualitative test.

[Statutory Authority: RCW 46.61.506. 10-24-067, § 448-14-010, filed 11/30/10, effective 12/31/10; Order 4, § 448-14-010, filed 7/9/70; Emergency and Permanent Order 3, § 448-14-010, filed 9/23/69.]

WAC 448-14-020 Operational discipline of blood samples for alcohol. (1) Analytical procedure.

- (a) The analytical procedure should include:
 (i) A control test
 (ii) A blank test

(iii) Duplicate analyses that agree to within plus or minus ten percent of their mean.

(b) All sample remaining after analysis should be retained for at least three months under suitable storage conditions for further analysis if required.

(c) Each analyst will engage in a proficiency test program in which some blood samples containing alcohol are exchanged with other laboratories and tested so that the proficiency of each analyst and the precision and accuracy of the test method can be evaluated no less than one time per year.

(2) Reporting procedure.

(a) The results should be expressed as grams of alcohol per 100 mL of whole blood sample.

(b) The analysis results should be reported to two significant figures.

(c) Blood alcohol results on living subjects of 0.009 grams of alcohol per 100 mL or lower will be reported as negative. Blood alcohol results on post-mortem samples of 0.019 grams of alcohol per 100 mL or less will be reported as negative. (See WAC 448-14-010 (2)(b))

(3) Sample container and preservative.

(a) A chemically clean dry container consistent with the size of the sample with an inert leak-proof stopper will be used.

(b) Blood samples for alcohol analysis must be preserved with an anticoagulant and an enzyme poison sufficient in amount to prevent clotting and stabilize the alcohol concentration. Suitable preservatives and anticoagulants include the combination of sodium fluoride and potassium oxalate.

[Statutory Authority: RCW 46.61.506. 10-24-067, § 448-14-020, filed 11/30/10, effective 12/31/10; Order 4, § 448-14-020, filed 7/9/70; Emergency and Permanent Order 3, § 448-14-020, filed 9/23/69.]

WAC 448-14-030 Qualifications for a blood alcohol analyst. (1) Minimum qualifications for the issuance by the state toxicologist of a blood alcohol analyst permit will include college level training in fundamental analytical chemistry with a minimum of five quarter hours of quantitative chemistry laboratory or equivalent, with a passing grade.

(2) The state toxicologist will issue a blood alcohol analyst permit to each person found to be properly qualified, and will hold written, oral or practical examinations to aid the state toxicologist in judging qualifications of applicants. Such permits will bear the signature or facsimile signature of the state toxicologist and be dated.

(3) The blood alcohol analyst permits are subject to cancellation by the state toxicologist if the permittee refuses or fails to obtain satisfactory results on samples periodically distributed to the permittees by the state toxicologist.

[Statutory Authority: RCW 46.61.506. 10-24-067, § 448-14-030, filed 11/30/10, effective 12/31/10; Order 4, § 448-14-030, filed 7/9/70; Emergency and Permanent Order 3, § 448-14-030, filed 9/23/69.]

Chapter 448-16 WAC

ADMINISTRATION OF BREATH TEST PROGRAM

WAC

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WAC 448-16-020 Approval of breath test equipment.

(1) Pursuant to RCW 46.61.506, the following instruments are approved for the quantitative measurement of alcohol in a person's breath:

- (a) The DataMaster;
- (b) The DataMaster CDM; and
- (c) The Drager Alcotest 9510.

(2) Pursuant to RCW 46.61.506, the following thermometers are approved:

(a) Mercury in glass thermometers with a scale graduated in tenths of a degree measuring a range between 33.5 and 34.5 degrees centigrade.

(b) Digital thermometer system contained within the Guth 2100 wet bath simulator.

[Statutory Authority: RCW 46.61.506, 10-24-066, § 448-16-020, filed 11/30/10, effective 12/31/10; 04-19-144, § 448-16-020, filed 9/22/04, effective 10/23/04.]

WAC 448-16-030 Definitions. (1) "Accuracy" means the proximity of a measured value to a reference value.

(2) "Alcohol" means the unique chemical compound ethyl alcohol.

(3) "Blank test" means the testing of an instrument to ensure that no alcohol from a previous test can interfere with a person's breath test.

(4) "Concentration" means the weight amount of alcohol, expressed in grams, contained in two hundred ten liters of breath or alcohol/water vapor.

(5) "Data entry" means the process of providing information to the instrument for the purposes of identifying a breath test document to an individual.

(6) "Interference" means a test result whose infrared absorbance or electrochemical analysis properties are not consistent with ethyl alcohol.

(7) "End expiratory air" means the last portion of breath to be delivered to the instrument once the appropriate sample acceptance criteria have been met.

(8) "External standard test" means the process by which the accuracy of the instrument is verified, using a simulator containing a certified simulator solution or a compressed gas standard containing a known alcohol concentration.

(9) "Internal standard test" means the process by which the instrument calibration is verified.

(10) "Precision" means the ability of a technique to perform a measurement in a reproducible manner.

(11) "Simulator" means a device which when filled with a certified simulator solution, maintained at a known temperature, provides a vapor sample of known alcohol concentration.

(12) "Valid breath sample" means a sample of a person's breath provided in such a manner to be accepted for analysis by the instrument.

[Statutory Authority: RCW 46.61.506, 10-24-066, § 448-16-030, filed 11/30/10, effective 12/31/10; 04-19-144, § 448-16-030, filed 9/22/04, effective 10/23/04.]

WAC 448-16-040 Foreign substances, interference, and invalid samples. (1) A determination as to whether a subject has a foreign substance in his or her mouth will be made by either an examination of the mouth or a denial by the person that he or she has any foreign substances in their mouth. A test mouthpiece is not considered a foreign substance for purposes of RCW 46.61.506.

(2) If a subject is wearing jewelry or ornamentation pierced through their tongue, lips, cheek, or other soft tissues in the oral cavity, they will be required to remove this prior to conducting the breath test. If the subject declines to remove the jewelry or ornamentation, they will be deemed to have a physical limitation rendering them incapable of providing a valid breath sample and will be required to provide a blood sample under the implied consent statute, RCW 46.20.308.

(3) If during a breath test, interference is detected, this will invalidate the test. The subject will be required to repeat the test. A subject whose breath registers the presence of interference on two or more successive breaths shall be deemed to have a physical limitation rendering them incapable of providing a valid breath sample and will be required to provide a blood sample under the implied consent statute, RCW 46.20.308.

(4) In the event that the instrument records an "invalid sample" result at any point during the subject's test, that subject's test should be readministered, after again determining that the subject has no foreign substance in their mouth as outlined in WAC 448-16-040(1), and repeating the fifteen minute observation period.

[Statutory Authority: RCW 46.61.506, 10-24-066, § 448-16-040, filed 11/30/10, effective 12/31/10; 04-19-144, § 448-16-040, filed 9/22/04, effective 10/23/04.]

WAC 448-16-050 Test defined. A test of a person's breath for alcohol concentration will consist of the person exhaling end-expiratory air samples at least twice into the instrument, sufficient to allow two separate measurements. There will be sufficient time between the provision of each sample to permit the instrument to measure each sample individually. Two valid breath samples, provided consecutively, will constitute one test.

The instrument will perform this test according to the following protocol when being employed to quantitatively measure an individual's breath alcohol concentration. Successful compliance with each step of this protocol is determined from an inspection of the printout of results. These steps are necessary to ensure accuracy, precision, and confidence in each test.

Step 1. Data entry.

Step 2. Blank test with a result of .000.

Step 3. Internal standard verified.

Step 4. First breath sample provided by subject.

Step 5. Blank test with a result of .000.

Step 6. External standard test. The result of this test must be between .072 and .088, inclusive.

Step 7. Blank test with a result of .000.

Step 8. Second breath sample provided by subject.

Step 9. Blank test with a result of .000.

Step 10. Printout of results.

[Statutory Authority: RCW 46.61.506, 10-24-066, § 448-16-050, filed 11/30/10, effective 12/31/10; 04-19-144, § 448-16-050, filed 9/22/04, effective 10/23/04.]

WAC 448-16-060 Determining agreement of duplicate breath samples. Pursuant to RCW 46.61.506 the following method is approved for determining whether two breath samples agree to within plus or minus ten percent of their mean.

(1) The breath test results will be reported, truncated to three decimal places.

(2) For the DataMaster instruments, the mean of the two breath test results will be calculated and rounded to four decimal places. For the Drager instrument, the mean of all four results will be calculated and rounded to four decimal places.

(3) The lower acceptable limit will be determined by multiplying the above mean by 0.9, and truncating to three decimal places.

(4) The upper acceptable limit will be determined by multiplying the mean by 1.1 and truncating to three decimal places.

(5) If the individual results fall within and inclusive of the upper and lower acceptable limits, the two breath samples are valid.

[Statutory Authority: RCW 46.61.506, 10-24-066, § 448-16-060, filed 11/30/10, effective 12/31/10; 04-19-144, § 448-16-060, filed 9/22/04, effective 10/23/04.]

WAC 448-16-070 Review, approval, and authorization of protocols of procedures and methods by the state toxicologist. The state toxicologist will review, approve, and authorize such protocols of procedures and methods (of the toxicologist's own promulgation or submitted by outside agencies or individuals for consideration) required in the administration of the breath test program. These protocols will be updated as necessary to maintain the quality of the breath test program.

[Statutory Authority: RCW 46.61.506, 10-24-066, § 448-16-070, filed 11/30/10, effective 12/31/10; 04-19-144, § 448-16-070, filed 9/22/04, effective 10/23/04.]

WAC 448-16-080 Instructors. The state toxicologist will certify persons found to be competent and qualified, as "instructors." Instructors are authorized to administer breath tests for alcohol concentration using approved instruments and are further authorized to train and certify as operators, according to outlines approved by the state toxicologist, those persons the instructor finds qualified to administer the breath test utilizing approved instruments. Instructors who are also certified as PBT technicians may instruct other individuals as PBT technicians according to the approved outlines.

If an instructor fails or refuses to demonstrate to the state toxicologist, that they have the ability to adequately perform their responsibilities as an instructor, then the state toxicologist will suspend their permit.

[Statutory Authority: RCW 46.61.506, 10-24-066, § 448-16-080, filed 11/30/10, effective 12/31/10; 04-19-144, § 448-16-080, filed 9/22/04, effective 10/23/04.]

WAC 448-16-090 Operators. The state toxicologist, or certified instructors will certify as "operators" persons found by them to be competent and qualified to administer breath tests for alcohol concentration using approved breath testing instruments.

If an operator fails or refuses to demonstrate to the state toxicologist or to a certified instructor, that he or she has the ability to adequately perform his or her responsibilities as an operator, then the state toxicologist will suspend their permit.

[Statutory Authority: RCW 46.61.506, 10-24-066, § 448-16-090, filed 11/30/10, effective 12/31/10; 04-19-144, § 448-16-090, filed 9/22/04, effective 10/23/04.]

WAC 448-16-100 External standard changers. The state toxicologist, or certified instructors, will certify as "external standard changers" operators found by them to be competent and qualified. In addition to being qualified as "operators" these persons must receive approved instruction covering the changing of simulator external standard solutions and compressed gas cylinders for approved breath test instruments, taught by a certified instructor.

If an external standard changer fails or refuses to demonstrate to the state toxicologist or to a certified instructor, that he or she has the ability to adequately perform his or her responsibilities as an external standard changer, then the state toxicologist will suspend their permit.

[Statutory Authority: RCW 46.61.506, 10-24-066, § 448-16-100, filed 11/30/10, effective 12/31/10; 04-19-144, § 448-16-100, filed 9/22/04, effective 10/23/04.]

WAC 448-16-110 Technicians. The state toxicologist will certify as "technicians" such persons found to be competent and qualified to maintain the proper working order of breath test instruments through adjustment, repair, and regular service.

Technicians are authorized to perform maintenance, calibration and instruction in the use of the portable breath test devices. Technicians are also authorized to instruct persons otherwise qualified as "technicians," "instructors," "operators," and "external standard changers" according to training outlines approved by the state toxicologist. Certified technicians are themselves authorized to perform the duties of "instructors," "operators," and "external standard changers."

If a technician fails or refuses to demonstrate to the state toxicologist, that he or she has the ability to adequately perform his or her responsibilities as a technician, then the state toxicologist will suspend their permit.

[Statutory Authority: RCW 46.61.506, 10-24-066, § 448-16-110, filed 11/30/10, effective 12/31/10; 04-19-144, § 448-16-110, filed 9/22/04, effective 10/23/04.]

WAC 448-16-120 Permit cards. Pursuant to RCW 46.61.506, the state toxicologist will authorize the issuance to persons deemed qualified as "instructors," "operators," "solution changers" or "technicians," a wallet-sized card bearing his or her name and designation. Permit cards will bear the signature or facsimile signature of the state toxicologist. Such permit cards will expire three years after the date on the card,

unless renewed for a like three-year period. Operators whose authorization expires may take recertification training within ninety days following expiration of their prior certification, but are not certified to perform any evidential breath tests during that period. Once ninety days have elapsed after the expiration of authorization, the operator must repeat the basic certification training.

[Statutory Authority: RCW 46.61.506. 10-24-066, § 448-16-120, filed 11/30/10, effective 12/31/10; 04-19-144, § 448-16-120, filed 9/22/04, effective 10/23/04.]

WAC 448-16-130 Review, approval, and authorization by the state toxicologist of training courses and outlines. The state toxicologist will approve and authorize such courses and course outlines (of the toxicologist's own promulgation or submitted for consideration by outside agencies or individuals) required in the training of breath test program personnel. Instructors are directed to use only approved outlines in conducting the training of operators.

[Statutory Authority: RCW 46.61.506. 10-24-066, § 448-16-130, filed 11/30/10, effective 12/31/10; 04-19-144, § 448-16-130, filed 9/22/04, effective 10/23/04.]

WAC 448-16-140 Information concerning technical aspects of the breath test program. All documents and records produced by the state toxicologist and personnel involved in breath testing for the state of Washington are available on request. Copies of most of these records are available at no charge on a web site maintained by the Washington state patrol at <http://breathtest.wsp.wa.gov/welcome.htm>.

[Statutory Authority: RCW 46.61.506. 10-24-066, § 448-16-140, filed 11/30/10, effective 12/31/10; 04-19-144, § 448-16-140, filed 9/22/04, effective 10/23/04.]

WAC 448-16-150 Address for correspondence. Information regarding instrument records, or the certification of operators, instructors, solution changers, and technicians should be obtained from the Washington State Patrol, Breath Test Program, 811 E. Roanoke, Seattle, WA 98102.

Persons seeking information regarding other aspects of the breath alcohol testing program will direct their request initially to the State Toxicologist, Washington State Toxicology Laboratory, Forensic Laboratory Services Bureau, Washington State Patrol, 2203 Airport Way S., Seattle, WA 98134.

[Statutory Authority: RCW 46.61.506. 10-24-066, § 448-16-150, filed 11/30/10, effective 12/31/10; 04-19-144, § 448-16-150, filed 9/22/04, effective 10/23/04.]

WAC 448-16-160 Severability. If any part or provision of these rules or regulations or the application thereof is held invalid, such invalidity will not affect other provisions or applications of these rules which can be given effect without the invalid provision or application, and to this end any section, paragraph or sentence, is declared to be severable.

[Statutory Authority: RCW 46.61.506. 10-24-066, § 448-16-160, filed 11/30/10, effective 12/31/10; 04-19-144, § 448-16-160, filed 9/22/04, effective 10/23/04.]