

# Title 448 WAC

## STATE TOXICOLOGIST

### Chapters

- 448-13 Administration of breath test program.**
- 448-14 State toxicologist standards for analysis of blood samples for alcohol.**

### DISPOSITION OF CHAPTERS FORMERLY CODIFIED IN THIS TITLE

#### Chapter 448-12

#### ADMINISTRATION OF BREATHALYZER TEST

448-12-010	Breathalyzer approved. [Order 4, § 448-12-010, filed 7/9/70; Order 2, § 448-12-010, filed 1/31/69.] Repealed by 91-06-022, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 46.61.506.	448-12-100	by 91-06-022, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 46.61.506.
448-12-015	Checking of breathalyzer machines. [Order 4, § 448-12-015, filed 7/9/70.] Repealed by 91-06-022, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 46.61.506.	448-12-210	Names of instructors. [Statutory Authority: RCW 46.61.506. 80-05-112 (Order 80-01), § 448-12-100, filed 5/6/80; Order 5, § 448-12-100, filed 10/19/72.] Repealed by 91-06-022, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 46.61.506.
448-12-016	Certifications. [Order 4, § 448-12-016, filed 7/9/70.] Repealed by 91-06-022, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 46.61.506.	448-12-220	BAC Verifier DataMaster, infrared breath test instrument approved. [Statutory Authority: RCW 46.61.506. 86-16-058 (Order 86-02), § 448-12-210, filed 8/4/86; 86-05-003 (Order 85-03), § 448-12-210, filed 2/7/86; 85-08-012 (Order 85-01), § 448-12-210, filed 3/27/85.] Repealed by 91-06-022, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 46.61.506.
448-12-020	Administration of breathalyzer test. [Statutory Authority: RCW 46.61.506. 86-20-085 (Order 86-04), § 448-12-020, filed 10/1/86; 80-05-112 (Order 80-01), § 448-12-020, filed 5/6/80; Order 5, § 448-12-020, filed 10/19/72; Order 4, § 448-12-020, filed 7/9/70; Order 2, § 448-12-020, filed 1/31/69.] Repealed by 91-06-022, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 46.61.506.	448-12-230	Test defined. [Statutory Authority: RCW 46.61.506. 86-16-058 (Order 86-02), § 448-12-220, filed 8/4/86; 86-05-003 (Order 85-03), § 448-12-220, filed 2/7/86; 85-08-012 (Order 85-01), § 448-12-220, filed 3/27/85.] Repealed by 91-06-022, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 46.61.506.
448-12-030	Instructors. [Order 4, § 448-12-030, filed 7/9/70; Order 2, § 448-12-030, filed 1/31/69.] Repealed by 91-06-022, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 46.61.506.	448-12-240	Administration of breath test on BAC Verifier DataMaster instrument. [Statutory Authority: RCW 46.61.506. 86-16-058 (Order 86-02), § 448-12-230, filed 2/7/86; 85-08-012 (Order 85-03), § 448-12-230, filed 3/27/85.] Repealed by 91-06-022, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 46.61.506.
448-12-040	Maintenance operators. [Order 4, § 448-12-040, filed 7/9/70; Order 2, § 448-12-040, filed 1/31/69.] Repealed by 91-06-022, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 46.61.506.	448-12-250	Instructors. [Statutory Authority: RCW 46.61.506. 86-05-003 (Order 85-03), § 448-12-240, filed 2/7/86; 85-08-012 (Order 85-01), § 448-12-240, filed 3/27/85.] Repealed by 91-06-022, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 46.61.506.
448-12-050	Operators. [Order 4, § 448-12-050, filed 7/9/70; Order 2, § 448-12-050, filed 1/31/69.] Repealed by 91-06-022, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 46.61.506.	448-12-260	Operators. [Statutory Authority: RCW 46.61.506. 86-16-058 (Order 86-02), § 448-12-250, filed 8/4/86; 86-05-003 (Order 85-03), § 448-12-250, filed 2/7/86; 85-08-012 (Order 85-01), § 448-12-250, filed 3/27/85.] Repealed by 91-06-022, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 46.61.506.
448-12-055	Review of qualifications. [Order 4, § 448-12-055, filed 7/9/70; Order 2, § 448-12-055, filed 1/31/69.] Repealed by 91-06-022, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 46.61.506.	448-12-270	Review of qualifications. [Statutory Authority: RCW 46.61.506. 85-08-012 (Order 85-01), § 448-12-260, filed 3/27/85.] Repealed by 91-06-022, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 46.61.506.
448-12-060	Permit cards. [Order 4, § 448-12-060, filed 7/9/70; Order 2, § 448-12-060, filed 1/31/69.] Repealed by 91-06-022, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 46.61.506.	448-12-280	Permit cards. [Statutory Authority: RCW 46.61.506. 86-05-003 (Order 85-03), § 448-12-270, filed 2/7/86; 85-08-012 (Order 85-01), § 448-12-270, filed 3/27/85.] Repealed by 91-06-022, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 46.61.506.
448-12-070	Course approval. [Order 4, § 448-12-070, filed 7/9/70; Order 2, § 448-12-070, filed 1/31/69.] Repealed by 91-06-022, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 46.61.506.	448-12-290	Course approval. [Statutory Authority: RCW 46.61.506. 86-05-003 (Order 85-03), § 448-12-280, filed 2/7/86; 85-08-012 (Order 85-01), § 448-12-280, filed 3/27/85.] Repealed by 91-06-022, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 46.61.506.
448-12-075	Minimum course requirements. [Order 4, § 448-12-075, filed 7/9/70; Order 2, § 448-12-075, filed 1/31/69.] Repealed by 91-06-022, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 46.61.506.	448-12-300	Minimum course requirements. [Statutory Authority: RCW 46.61.506. 85-08-012 (Order 85-01), § 448-12-290, filed 3/27/85.] Repealed by 91-06-022, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 46.61.506.
448-12-080	Instruction. [Order 5, § 448-12-080, filed 10/19/72; Order 4, § 448-12-080, filed 7/9/70; Order 2, § 448-12-080, (Grandfather clause), filed 1/31/69.] Repealed by 91-06-022, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 46.61.506.	448-12-310	Instruction. [Statutory Authority: RCW 46.61.506. 86-05-003 (Order 85-03), § 448-12-300, filed 2/7/86; 85-08-012 (Order 85-01), § 448-12-300, filed 3/27/85.] Repealed by 91-06-022, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 46.61.506.
448-12-090	Address for correspondence. [Statutory Authority: RCW 46.61.506. 80-05-112 (Order 80-01), § 448-12-090, filed 5/6/80; Order 2, § 448-12-090, filed 1/31/69.] Repealed		Operators and instructors. [Statutory Authority: RCW 46.61.506. 85-08-012 (Order 85-01), § 448-12-310, filed 3/27/85.] Repealed by 86-05-003 (Order 85-03), filed 2/7/86. Statutory Authority: RCW 46.61.506.

- 448-12-320 Address for correspondence. [Statutory Authority: RCW 46.61.506. 86-16-058 (Order 86-02), § 448-12-320, filed 8/4/86; 86-05-003 (Order 85-03), § 448-12-320, filed 2/7/86; 85-08-012 (Order 85-01), § 448-12-320, filed 3/27/85.] Repealed by 91-06-022, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 46.61.506.
- 448-12-330 Names of instructors. [Statutory Authority: RCW 46.61.506. 86-05-003 (Order 85-03), § 448-12-330, filed 2/7/86; 85-08-012 (Order 85-01), § 448-12-330, filed 3/27/85.] Repealed by 91-06-022, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 46.61.506.
- 448-12-340 Effective date. [Statutory Authority: RCW 46.61.506. 86-05-003 (Order 85-03), § 448-12-340, filed 2/7/86; 85-08-012 (Order 85-01), § 448-12-340, filed 3/27/85.] Repealed by 91-06-022, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 46.61.506.

### Chapter 448-13 WAC

#### ADMINISTRATION OF BREATH TEST PROGRAM

##### WAC

- 448-13-010 Basis for rules governing breath testing.
- 448-13-020 Approval of breath test instruments.
- 448-13-030 Definitions.
- 448-13-040 Administration of breath test on the BAC Verifier DataMaster.
- 448-13-050 Test defined.
- 448-13-060 Validity and certification of test results.
- 448-13-070 External standard simulator solution.
- 448-13-080 Preparation and certification of external standard simulator solution.
- 448-13-090 Software.
- 448-13-100 Use of the data base on the BAC Verifier DataMaster.
- 448-13-110 Quality assurance program.
- 448-13-120 Blood/breath correlation studies.
- 448-13-130 Review, approval, and authorization of protocols of procedures and methods by the state toxicologist.
- 448-13-140 Instructors.
- 448-13-150 Operators.
- 448-13-160 Solution changers.
- 448-13-170 Technicians.
- 448-13-180 Permit cards.
- 448-13-190 Review, approval, and authorization by the state toxicologist of training courses and outlines.
- 448-13-200 Information concerning technical aspects of the breath test program.
- 448-13-210 Address for correspondence.
- 448-13-220 Effective date.

**WAC 448-13-010 Basis for rules governing breath testing.** These rules have been written based on currently accepted scientific principles and practices in the field of breath alcohol testing. They have been formulated to inform the public of the administrative aspects of the state's breath alcohol test program. Technical aspects of breath testing are constantly investigated, discussed, and debated in the scientific literature. The procedures used in the operation of this program may be updated to reflect the consensus in the relevant scientific community. The state toxicologist will provide information on the technical details of any of the currently used procedures upon request pursuant to WAC 448-13-210. The office of the state toxicologist will cooperate fully with the courts in the interpretation of these rules and in providing additional technical information.

[Statutory Authority: RCW 46.61.506. 91-06-022, § 448-13-010, filed 2/26/91, effective 3/29/91.]

**WAC 448-13-020 Approval of breath test instruments.** Pursuant to RCW 46.61.506, the BAC Verifier DataMaster is the only infrared breath test instrument approved by the state toxicologist as a device for the measurement of alcohol in a person's breath. A simulator filled with a certified simulator solution will be attached to each instrument to provide a known external standard as defined in WAC 448-13-030(13). The simulator used must be on the National Highway Traffic Safety Administration (NHTSA) conforming products list. Any agency, group, or individual seeking approval or certification from the state toxicologist for the use of other breath test instruments for evidential breath testing programs in the state of Washington should contact the state toxicologist at the address given in WAC 448-13-210.

[Statutory Authority: RCW 46.61.506. 91-21-040, § 448-13-020, filed 10/11/91, effective 11/11/91; 91-06-022, § 448-13-020, filed 2/26/91, effective 3/29/91.]

**WAC 448-13-030 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 a DataMaster instrument to ensure that no alcohol from a previous test can interfere with a person's breath test.

(4) "Breath alcohol analysis" means analysis of a sample of a person's expired breath, using a breath testing instrument designed for this purpose, which instrument is approved by the state toxicologist, in order to determine the alcohol concentration in that breath sample.

(5) "Breath test document" means the form which is printed by the BAC Verifier DataMaster on the completion of a breath alcohol test.

(6) "Calibration" means the process of standardizing the DataMaster using a certified simulator solution to allow by proportion, the measurement of the alcohol concentration of a person's breath. Calibration will be performed periodically as required and at least once a year during quality assurance.

(7) "Certified" when used in conjunction with breath test personnel means an operator, instructor, solution changer or technician possessing a valid permit.

(8) "Certified simulator solution" means an alcohol/water solution prepared and tested by an approved protocol, and meeting the criteria specified therein.

(9) "Certified test" means a test conducted in accordance with WAC 448-13-040 and 448-13-050. A test which meets these requirements as determined from the breath test document is a certified test.

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

(11) "Data base" means information collected primarily for the purposes of statistical analysis of patterns of drinking and driving in the state of Washington.

(12) "Data entry" means the process of providing information through a keyboard to the BAC Verifier DataMaster for the purposes of (a) identifying a breath test document to an individual, and (b) statistical analysis.

(13) "External standard test" means the use of a simulator containing a certified simulator solution, to provide a

known alcohol vapor concentration to test the accuracy and proper working order of the DataMaster and confirm its calibration at the time of a person's breath test. This test of the function of the DataMaster is performed with every breath test. The external standard test does not calibrate the DataMaster.

(14) "Internal standard test" means the use of a quartz filter to provide a check that the instrument has maintained calibration since the last time calibration was performed and is in proper working order at the time of the test.

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

(16) "Procedure" and "method" are used interchangeably to indicate a series of steps which, when carried out as directed, constitute the means by which a given task is performed in a reproducible manner.

(17) "Protocol" means the written record of any method or procedure.

(18) "Quality assurance program" means an ongoing program designed to perform preventative maintenance and identify potential defects before they affect the operation of the instrument.

(19) "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.

(20) "Software" means the computer program stored in the DataMaster which allows it to operate.

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

[Statutory Authority: RCW 46.61.506, 91-06-022, § 448-13-030, filed 2/26/91, effective 3/29/91.]

**WAC 448-13-040 Administration of breath test on the BAC Verifier DataMaster.** The following method for performing a breath test is approved by the state toxicologist pursuant to WAC 448-13-130 and includes the following safeguards to be observed by the operator prior to the test being performed. It must be determined that: (1) The person does not vomit or have anything to eat, drink, or smoke for at least fifteen minutes prior to administration of the test; and (2) the subject does not have any foreign substances, not to include dental work, fixed or removable, in his or her mouth at the beginning of the fifteen minute observation period. Such determination shall be made by either an examination of the mouth or a denial by the person that he or she has any foreign substances in mouth. A test mouthpiece is not to be considered a foreign substance for purposes of this section. The temperature of the solution in the simulator prior to the start of the test must be thirty-four degrees centigrade plus or minus 0.2 degrees centigrade. During the test the person will be required to provide at least two valid breath samples. A refusal to provide a valid breath sample at any point during the test will constitute a refusal. The results of the test will be provided in the form of a printout on a breath test document. These results will indicate the grams of alcohol per two hundred ten liters of breath.

[Statutory Authority: RCW 46.61.506, 91-21-040, § 448-13-040, filed 10/11/91, effective 11/11/91; 91-06-022, § 448-13-040, filed 2/26/91, effective 3/29/91.]

**WAC 448-13-050 Test defined.** The test of a person's breath for alcohol concentration using the BAC Verifier DataMaster shall consist of the person insufflating 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. The two valid breath samples will constitute one test.

The BAC Verifier DataMaster will perform this test according to the following protocol when being employed to measure an individual's breath alcohol concentration. Any test not performed according to the following protocol is not a valid test. Successful compliance with each step of this protocol is determined from an inspection of the breath test document. 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 .00.
- Step 3. Internal standard verified.
- Step 4. First breath sample provided by subject.
- Step 5. Blank test with a result of .00.
- Step 6. External standard simulator solution test. The result of this test must be between .090 and .110 inclusive.
- Step 7. Blank test with a result of .00.
- Step 8. Second breath sample provided by subject.
- Step 9. Blank test with a result of .00.
- Step 10. Printout of results on a breath test document.

[Statutory Authority: RCW 46.61.506, 91-06-022, § 448-13-050, filed 2/26/91, effective 3/29/91.]

**WAC 448-13-060 Validity and certification of test results.** A test shall be a valid test and so certified, if the requirements of WAC 448-13-040 and 448-13-050 are met, and in addition the following criteria for precision and accuracy, as determined solely from the breath test document, are met:

- (1) The internal standard test results in the message "verified."
- (2) The results of both breath samples are within, and inclusive of, plus or minus ten percent of the average of the two measurements. The upper and lower limits of this range shall be based on a three-digit average and shall be truncated to two digits (e.g., .109 will be read as .10).
- (3) The simulator external standard result lies between .090 to .110 inclusive.
- (4) All four blank tests give results of .00.

If these criteria are met, then these and no other factors are necessary to indicate the proper working order of the instrument, and so certify it, at the time of the breath test.

[Statutory Authority: RCW 46.61.506, 91-06-022, § 448-13-060, filed 2/26/91, effective 3/29/91.]

**WAC 448-13-070 External standard simulator solution.** In order to validate and certify the proper working order of the BAC Verifier DataMaster at the time of a person's breath test, the vapor from a certified external

standard simulator solution will be tested, separated by blank tests, between the two valid breath samples provided by the subject per WAC 448-13-050. This test of the vapor from the certified external standard simulator solution concentration, by the infrared technique employed by the BAC Verifier DataMaster, will confirm the certification of the person's test results as they appear on the breath test document, provided that the results of such analysis also meet the criteria of WAC 448-13-060. At such time as the concentration of the vapor from the external standard simulator solution measured by the DataMaster approaches the lower acceptable limit of .090, the solution will be discarded and replaced with a new solution which meets the criteria of WAC 448-13-080. As there is no meaningful way to interpret data resulting from reanalysis of the simulator solution following its removal after use on a DataMaster instrument, collection and reanalysis of such solutions is neither recommended nor approved by the state toxicologist. The internal standard test conducted with every breath test provides a check that the instrument has remained in calibration while in use in the field.

[Statutory Authority: RCW 46.61.506. 91-06-022, § 448-13-070, filed 2/26/91, effective 3/29/91.]

**WAC 448-13-080 Preparation and certification of external standard simulator solution.** The external standard simulator solutions shall be prepared by the forensic toxicology staff in the state toxicology laboratory, using standard laboratory procedures, in such a manner that when used in a BAC Verifier DataMaster the external standard test performed as part of a person's breath test pursuant to WAC 448-13-050, will read between .090 and .110 inclusive, at the time of the test. The principle used for the preparation of the simulator solutions is that a 0.123g/100mL solution will give a vapor ethanol concentration at 34°C of 0.100g/210L. The protocol which shall be followed for the preparation and certification of the external standard simulator solution will be that protocol currently approved and authorized by the state toxicologist according to WAC 448-13-130 and conforming to WAC 448-14-010. Details of the currently approved and authorized protocols are available upon request from the office of the state toxicologist. Sworn statements from the analyst regarding the preparation, testing, and certification of the simulator solution are available under the provisions of CrRLJ 6.13.

[Statutory Authority: RCW 46.61.506. 91-21-040, § 448-13-080, filed 10/11/91, effective 11/11/91; 91-06-022, § 448-13-080, filed 2/26/91, effective 3/29/91.]

**WAC 448-13-090 Software.** The software which shall be used in the data collection by, in the operation of, and in the measurements made by the BAC Verifier DataMaster, will be those versions currently approved for use by the state toxicologist. A list of those versions of software currently approved for use can be obtained from the office of the state toxicologist.

[Statutory Authority: RCW 46.61.506. 91-06-022, § 448-13-090, filed 2/26/91, effective 3/29/91.]

**WAC 448-13-100 Use of the data base on the BAC Verifier DataMaster.** The specific purpose of the data base

functions of the BAC Verifier DataMaster is to provide statistical analysis and remote monitoring of the instruments to determine their current operational status. The information contained in the data base is separate from, and does not affect the results of, any individual breath test. All information required to certify a breath test per WAC 448-13-060 is contained in the breath test document. The presence or absence of data base information does not compromise the validity of a breath test certified per WAC 448-13-060.

[Statutory Authority: RCW 46.61.506. 91-06-022, § 448-13-100, filed 2/26/91, effective 3/29/91.]

**WAC 448-13-110 Quality assurance program.** Technicians authorized per WAC 448-13-170 and 448-13-180 shall carry out on a regular periodic basis a quality assurance program which shall include recalibration, and checks of components and function of every BAC Verifier DataMaster instrument used for evidential breath testing purposes in the state of Washington. The protocol which shall be followed for quality assurance will be that protocol currently approved and authorized by the state toxicologist pursuant to WAC 448-13-130.

Upon successfully meeting all the requirements of the quality assurance program, the instrument is approved by the state toxicologist for use over a period of not more than one year, or until such time as one of the following operations is required: Replacement of the central processing unit (CPU) board, replacement of the infrared detector, replacement of the infrared detector block, replacement of the infrared detector board, replacement or updating of the software, disassembly and then reassembly of the sample chamber, or recalibration. On successful completion of the quality assurance procedure the instrument is approved for use for a further one-year period. As the quality assurance procedure includes all the elements of the procedure previously known as "certification," the use of BAC Verifier DataMaster Certification documents described in CrRLJ 6.13 is recommended by the state toxicologist to indicate compliance with this quality assurance program.

[Statutory Authority: RCW 46.61.506. 91-06-022, § 448-13-110, filed 2/26/91, effective 3/29/91.]

**WAC 448-13-120 Blood/breath correlation studies.** The state toxicologist neither requires nor recommends that blood/breath correlation studies be conducted as part of the breath test program in the state of Washington. These studies may be used for experimental purposes to investigate the blood/breath ratio for a particular individual at a given time, but are inappropriate for use to establish or otherwise determine the proper working order of a breath test instrument at any time. Such proper working order will be determined by the use of an external simulator standard, as recommended by the National Highway Traffic Safety Administration (NHTSA), and such other criteria as required under WAC 448-13-040, 448-13-050, and 448-13-060.

[Statutory Authority: RCW 46.61.506. 91-06-022, § 448-13-120, filed 2/26/91, effective 3/29/91.]

**WAC 448-13-130 Review, approval, and authorization of protocols of procedures and methods by the state toxicologist.** The state toxicologist shall review, approve,

and authorize such protocols of procedures and methods (of his own promulgation or submitted to him by outside agencies or individuals) required in the administration of the breath test program. Such review, approval, and authorization will be so signified by a signed statement attached to each protocol, and kept on file in the office of the state toxicologist. These protocols will be updated as necessary to maintain the quality of the breath test program in light of new findings in the scientific literature or from peer discussion, or the availability of superior equipment or services. Information concerning currently approved protocols can be obtained on application to the office of the state toxicologist.

[Statutory Authority: RCW 46.61.506. 91-06-022, § 448-13-130, filed 2/26/91, effective 3/29/91.]

**WAC 448-13-140 Instructors.** The state toxicologist shall certify persons found by him to be competent and qualified, as "instructors." Instructors are authorized to administer breath tests for alcohol concentration using the BAC Verifier DataMaster infrared breath testing instrument 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 the BAC Verifier DataMaster breath test instrument. Details of persons certified as instructors shall be maintained by the state toxicologist and available upon request.

If an instructor fails or refuses to demonstrate to the state toxicologist or to his representative, 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. 91-06-022, § 448-13-140, filed 2/26/91, effective 3/29/91.]

**WAC 448-13-150 Operators.** The state toxicologist, or instructors on his behalf, shall certify as "operators" persons found by them to be competent and qualified to administer breath tests for alcohol concentration using the BAC Verifier DataMaster infrared breath testing instrument. Persons who have attended courses in the operation of the BAC Verifier DataMaster infrared breath testing instrument taught by an instructor qualified by the state toxicologist, upon certification of attendance and qualification, shall be designated as "operators." Details of persons so certified shall be maintained by the state toxicologist and available upon request.

If an operator fails or refuses to demonstrate to the state toxicologist or to an instructor certified by the state toxicologist, 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. 91-06-022, § 448-13-150, filed 2/26/91, effective 3/29/91.]

**WAC 448-13-160 Solution changers.** The state toxicologist, or instructors on his behalf, shall certify as "solution 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 for the

BAC Verifier DataMaster infrared breath testing instrument, taught by an instructor qualified by the state toxicologist. Details of persons so certified shall be maintained by the state toxicologist and available upon request.

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

[Statutory Authority: RCW 46.61.506. 91-06-022, § 448-13-160, filed 2/26/91, effective 3/29/91.]

**WAC 448-13-170 Technicians.** The state toxicologist shall certify as "technicians" such persons found by him to be competent and qualified to maintain the proper working order of the BAC Verifier DataMaster infrared breath testing instrument, through adjustment, repair, and regular service. Further, technicians are authorized by the state toxicologist to perform the procedures approved for periodic quality assurance of the BAC Verifier DataMaster infrared breath testing instruments as required pursuant to WAC 448-13-110. Details of persons so certified shall be maintained by the state toxicologist and available upon request.

If a technician fails or refuses to demonstrate to the state toxicologist or his representative, 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. 91-21-040, § 448-13-170, filed 10/11/91, effective 11/11/91; 91-06-022, § 448-13-170, filed 2/26/91, effective 3/29/91.]

**WAC 448-13-180 Permit cards.** The state toxicologist shall 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 shall bear the signature or facsimile signature of the state toxicologist. Such permit cards shall expire three years after the date on the card, unless renewed for a like three-year period.

[Statutory Authority: RCW 46.61.506. 91-06-022, § 448-13-180, filed 2/26/91, effective 3/29/91.]

**WAC 448-13-190 Review, approval, and authorization by the state toxicologist of training courses and outlines.** The state toxicologist shall approve and authorize such courses and course outlines (of his own promulgation or submitted for his consideration by outside agencies or individuals) required in the training of breath test program personnel. Such review, approval, and authorization will be so signified by a signed statement attached to each course outline. These course outlines may be reviewed and updated as necessary to maintain the quality of the breath test program. Instructors are directed to use only approved outlines in conducting the training of operators. Information concerning currently approved course outlines can be obtained on application to the office of the state toxicologist.

[Statutory Authority: RCW 46.61.506. 91-06-022, § 448-13-190, filed 2/26/91, effective 3/29/91.]

**WAC 448-13-200 Information concerning technical aspects of the breath test program.** Documents used by the state toxicologist and personnel involved in breath testing for the state of Washington, which are available on request include: The breath test document, simulator solution preparation protocol, alcohol analysis protocol, certification document for simulator solution, affidavit from analyst of simulator solution, quality assurance protocol, quality assurance procedure report, affidavit concerning quality assurance procedure, operator course outline, operator refresher course outline, and operator training record. A fee may be charged to cover the cost of providing these copies.

[Statutory Authority: RCW 46.61.506. 91-06-022, § 448-13-200, filed 2/26/91, effective 3/29/91.]

**WAC 448-13-210 Address for correspondence.** Persons seeking information regarding currently approved protocols and procedures, or information regarding those persons currently authorized as operators, instructors, solution changers, or technicians for the BAC Verifier DataMaster, shall direct their request to the State Toxicologist, State Toxicology Laboratory, Harborview Medical Center ZA-88, 325 9th Avenue, Seattle, Washington 98104.

[Statutory Authority: RCW 46.61.506. 91-06-022, § 448-13-210, filed 2/26/91, effective 3/29/91.]

**WAC 448-13-220 Effective date.** These provisions, WAC 448-13-010 through and including WAC 448-13-210, will be adopted and in full force and effect for all aspects of the operation of the breath alcohol concentration test program in the state of Washington thirty-one days after the filing of the permanent rules. These new provisions are not retroactive and will not apply to the interpretation of results from any breath test conducted prior to thirty-one days after the filing of the permanent rules.

[Statutory Authority: RCW 46.61.506. 91-06-022, § 448-13-220, filed 2/26/91, effective 3/29/91.]

## 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 shall 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% 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 shall give a test result which is always less than 0.005% 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.

[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 should agree to within 0.01% blood alcohol deviation from the 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 shall engage in a program in which some blood samples containing alcohol are exchanged with other laboratories and tested on a blind basis so that precision and accuracy 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, using the mathematical rule of rounding.

(c) Blood alcohol results on living subjects 0.0009% or lower shall be reported as negative. Blood alcohol results on post-mortem samples of 0.019% or less shall 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 shall be used.

(b) Blood samples for alcohol analysis shall 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.

[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 shall 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 shall issue a blood alcohol analyst permit to each person he finds to be properly qualified, and he shall hold written, oral or practical examinations to aid him in judging qualifications of applicants. Such permits shall 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.

[Order 4, § 448-14-030, filed 7/9/70; Emergency and Permanent Order 3, § 448-14-030, filed 9/23/69.]

