

Illinois Department of Public Health

Standards and Procedures for Testing for Alcohol and/or Other Drugs

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by Breath, Blood & Urine Analysis

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A Healthier Today For A Better Tomorrow

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Issued by:

**Illinois Department of Public Health
Division of Implied Consent
535 West Jefferson Street
Springfield, Illinois 62761
(217)782-1571**

In Consultation With:

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STANDARDS AND PROCEDURES FOR TESTING OF BREATH,
BLOOD AND URINE FOR ALCOHOL AND/OR OTHER DRUGS

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Section 510.10

AUTHORITY

Section 510.10 These Rules are promulgated by the Department of Public Health, State of Illinois, in consultation with the Department of State Police under authority prescribed in Section 11-501.2 and 11-501.4, Illinois Vehicle Code, Illinois Revised Statutes, Chapter 95 1/2, Paragraph 11-501.2 and 11-501.4.

Section 510.20

DEFINITIONS

AGENCY shall mean County, Municipal, State or Federal law enforcement agency, involved in the use of a breath analysis instrument.

ALCOHOL shall mean ethanol, commonly referred to as ethyl alcohol or alcoholic beverage.

CERTIFIED CONTROLLED REFERENCE SAMPLE shall mean a suitable reference of known ethyl alcohol concentration.

DEPARTMENT shall mean the Illinois Department of Public Health.

DIRECTOR shall mean the Director of the Illinois Department of Public Health.

INERT STOPPER shall mean a stopper that would not either add to or subtract from the concentration of alcohol and/or other drugs as measured by acceptable chemical procedures.

INSPECTOR shall mean a licensed breath analysis instrument operator, who through specialized training is authorized by the Department to examine, certify, and maintain breath analysis instruments and administer practical examinations to the operators.

INSTRUMENT shall mean any item or combination of items of equipment approved by the Department used to make a measurement of blood alcohol concentrations by breath analysis: simple and complex devices are included in this meaning.

LICENSE shall mean evidence issued by the Department to an individual as proof of his authority and competence to operate a breath analysis instrument.

LOG BOOK shall mean a written record by the law enforcement agency for tests performed according to standards and procedures on each instrument.

OPERATOR shall mean any individual licensed by the Department to operate a breath analysis instrument.

PHLEBOTOMIST shall mean a person who uses venesection to collect blood from another individual generally for diagnostic purposes.

W/V shall mean weight of alcohol in the volume of blood, breath, or certified controlled reference sample.

Section 510.30

CONSTRUCTION OF RULES

Words in this set of rules importing the masculine gender may be applied to females.

Section 510.40

INSTRUMENTS FOR ANALYZING THE
ALCOHOL CONTENT OF BLOOD BY BREATH

- a) Any breath testing instrument to be approved must automatically display the test results visually to the arrested person and provide for an automatic printed test record. Each printed recording shall also contain an automatically printed record of the reading of the testing device made immediately prior to the recording of the tested person.
- b) Instruments to be approved must utilize one of the following methods of breath analysis for blood alcohol concentration.
 - 1) Infra-red absorption - The Intoxilyzer models 4011, 4011A, 4011AS, 4011ASA, and 5000, the ALCOMAT, Alcotest 7110, BAC Verifier and Datamaster models, Breathalyzer model 2000, the Intoximeter model 3000 are instruments using the infra-red absorption method and have been approved by the Department.
 - 2) Photoelectric Colorimetry - The Breathalyzer Model 1000 is an instrument using the photoelectric colorimetry method and has been approved by the Department.
- c) Breath testing instruments to be approved in Illinois must be listed in the Qualified Products List of Evidential Breath Measuring Devices prepared by the National Highway Traffic Safety Administration of the U. S. Department of Transportation.
- d) Instruments which meet the provisions of Section 510.40(a),(b) and (c) will be tested by the Department in accordance with the Standards for Devices to Measure Breath Alcohol which were promulgated by the National Highway Traffic Safety Administration, U. S. Department of Transportation.
- e) Any manufacturer who sells breath analysis instruments in Illinois shall report to the Department all such sales listing the name of the agency, the make, and serial number of the instrument.

Section 510.50

ASSAYING OF AMPOULE SOLUTIONS

- a) All companies engaged in the manufacture, sale, and distribution of ampoule solution used in breath analysis instruments within Illinois shall submit to the Department a representative sample of ampoule

solution for each control number to be assayed. A certified assay report that the ampoules are within the acceptable tolerances for Breathalyzer solutions must be obtained from the Department prior to distribution of any ampoules with that control number.

- b) The acceptable tolerances for Breathalyzer solutions are as follows:
- 1) the tolerance for potassium dichromate is $0.250 \pm 5\%$ mg/ml
 - 2) the tolerance for the volume of solution is $3.0 + 0.1$ ml.
 - 3) the tolerance for specific gravity is 1.53 ± 0.01 @ 24°C .
 - 4) silver must be present in the solution
 - 5) sulfate must be present in the solution

Section 510.60

STANDARDS FOR THE OPERATION OF APPROVED BREATH ANALYSIS INSTRUMENTS

Procedures for breath alcohol analysis shall include the following requirements in conjunction with the testing of each subject:

- a) Continuous observation of the subject for at least twenty (20) minutes prior to collection of the breath specimen, during which period the subject must not have ingested alcohol, food, drink, regurgitated, vomited or smoked.
- b) A breath test shall consist of only one (1) breath analysis.
- c) Before a breath analysis, a room-air analysis must be conducted, the results of which must be less than 0.01 reading.
- d) Each test shall be performed according to an operational procedure approved by the Department which shall be based upon the manufacturer's recommended testing procedure.

Section 510.70

LICENSING OF OPERATOR

- a) To be eligible for license examination to qualify as an operator of a breath analysis instrument, the individual must be employed by a law enforcement agency or the Department, and shall have a minimum of thirty-four (34) hours of instruction which includes the following:
 - 1) Presentation, discussion, and demonstration of the psychological, physiological and pharmacological effects of alcohol in the human body.

- 2) Theory of instruments used in the analytical process which measures alcohol concentration.
 - 3) Practical application in the use of the instrument.
 - 4) A curriculum approved by the Department.
- b) An individual to be licensed under this rule shall pass the standardized written examination provided by the Department and satisfactorily complete the uniform practical proficiency examination administered by an inspector assigned by the Department.
- c) Termination of License.
- 1) A license shall be valid for a period of twelve (12) months from the date of issuance. If the license is not renewed as provided for in Section 510.80 of these Rules it shall terminate twelve (12) months from the date of issuance.
 - 2) A license shall automatically terminate when the licensee/operator is no longer employed by a law enforcement agency or the Department.
- d) Licensing classes will be held in locations approved by the Department based upon appropriate lighting, space, heating and air conditioning conditions.
- e) An operator currently licensed under another jurisdiction may apply for licensure in Illinois providing that he has successfully completed training which equals or exceeds the requirements specified in Section 510.70. Upon approval of the application by the Department, the applicant must successfully complete an approved 4-hour review course as stipulated under Section 510.80(b)(4).
- f) If the licensee/operator changes employment he shall immediately notify the Department. If the licensee/operator resigns from an agency and is employed by another approved agency prior to the date his license terminates, the Department shall reissue the license to that operator for the remainder of the period of his previous license.

Section 510.80

REQUIREMENTS FOR RENEWAL OF LICENSE

- a) Each operator must be re-examined prior to relicensure by the Department. This will be done on the following basis: In each twelve (12) month period, the operator regardless of the number of analyses he conducts, must successfully administer two (2) analyses using a certified controlled reference sample in the presence of an inspector.
- b) Within a two-year (2) period each operator must complete the following:
 - 1) Review of theory and practice with the instrument.

- 2) Review of standards and procedures.
 - 3) Discussion of current and related problems in the field.
 - 4) Successfully pass both the standardized written examination provided by the Department and the uniform practical proficiency examination administered by an inspector assigned by the Department.
- c) The Department will designate sites and dates for retraining classes and notify the head of the agency by letter which operators shall attend. Designation of sites and scheduling of classes will be arranged to minimize travel.
 - d) Retraining classes will be held in locations approved by the Department based upon appropriate lighting, space, heating and air conditioning conditions.

Section 510.90

REVOCATION AND DENIAL OF LICENSE

- a) The following are grounds for the revocation of a license issued to the operator of a breath analysis instrument:
 - 1) Misuse of the instrument by the operator in such a way that the operator is in violation of State statutes or these rules.
 - 2) Upon receipt of a complaint to the Department, a licensed operator may be subject to review by an inspector in the operation of the instrument using a certified controlled reference sample, and, at which time, his failure or refusal to perform analysis properly may be grounds for license revocation upon such recommendation of the inspector.
 - 3) Dismissal of the operator from his employing agency.
- b) A renewal of a license under Section 510.80 or reissuance of a license pursuant to Section 510.70(f) may be denied for the following reasons:
 - 1) Any grounds for revocation set forth in Section 510.90(a).
 - 2) Failure to comply with Section 510.80(a) and (b).
- c)
 - 1) In any action to revoke or deny a license the Department shall give the operator a notice of an opportunity for an administrative hearing as provided for in the Illinois Administrative Procedure Act (Ill. Rev.Stat., ch. 127, par. 1001 et seq.) and the Department's Rules of Practice and Procedure in Administrative Hearings (77 IL.Adm. Code 100).
 - 2) If the Department finds that the public interest, safety or welfare imperatively requires emergency action, the Department shall incorporate a finding to that effect in an order summarily

suspending a license pending proceedings for revocation or denial of license. The administrative proceeding shall be promptly instituted and determined.

- 3) If the Department orders the summary suspension of a license under subsection (b) of this rule, a copy of the Order shall be accompanied by a notice of an opportunity for an administrative hearing.
- d) The administrative hearing provided for in Section 510.90(c) shall be conducted by a Hearing Officer who is a person designated in writing by the Director to conduct the hearing.
- e) The Illinois Administrative Procedure Act (Ill.Rev.Stat., ch. 127, par. 1001 et seq.) and the Department's Rules of Practice and Procedure in Administrative Proceedings (77 Ill. Adm. Code 100) shall govern the administrative hearings provided for in Section 510.90(c).

Section 510.100

EXAMINING AND CERTIFYING INSTRUMENTS

- a) An instrument must be accurate within ± 0.01 W/V to be certified. To determine accuracy of instruments, an inspector shall perform two (2) analyses on a certified controlled reference sample at least once a month at intervals not to exceed 45 days. The inspector shall record test results of his certification in the instrument log book. The original certification test results will be retained by the inspector.
- b) Breath analysis instruments used shall be examined and certified by an inspector:
 - 1) Prior to being placed in operation.
 - 2) After being repaired or recalibrated.
- c) All agencies are to have their breath analysis instrument and log book available for examination by an inspector.
- d) An operational procedure approved pursuant to Section 510.60(d) shall be at each instrument location.
- e) An inspector must be notified when an agency has a malfunctioning instrument which needs repair.

Section 510.110

STANDARDS AND PROCEDURES FOR WITHDRAWING OF BLOOD AND/OR URINE SAMPLES FOR CHEMICAL ANALYSIS OF ALCOHOL OR OTHER DRUG CONTENT

- a) Blood Collection. When a person is arrested and the arresting officer requests a blood test to determine the amount of alcohol or other drugs

present, the blood sample shall be collected according to the following procedure(s):

- 1) Blood sample shall be collected in the presence of the arresting officer or other representative of the arresting officer's agency who can authenticate the sample.
- 2) The blood sample shall be collected per venipuncture by a physician licensed to practice medicine by a registered nurse or by a trained phlebotomist acting under the direction of a licensed physician.
- 3) Disinfectant. A disinfectant containing no alcohol or other volatile organic substance shall be used to clean the skin where a specimen is to be collected.
- 4) Equipment for Collection of Blood Samples.
 - A) Sterile, dry hypodermic needles and syringes or vacuum-type blood collecting containers shall be used. Reusable equipment, if used, shall not be cleaned or kept in alcohol or other volatile organic solvent.
 - B) When hypodermic needles and syringes are used, the sample obtained shall be dispensed in approximately equal volumes, directly into two (2) clean, dry containers. Alcohol or other volatile organic solvent shall not be used to clean the container. The blood shall be mixed with an anticoagulant/preservative which will not interfere with the intended analytical method. The containers shall be closed with inert stoppers.
 - C) When vacuum-type blood-collecting containers are to be used as primary collecting tubes, two (2) tubes should be collected each containing an anticoagulant/preservative which will not interfere with the intended analytical method.
 - D)
 - i) The individual containers shall be appropriately and securely labeled to provide the following information: name of accused; date and time of collection; collecting attendant; authorizing officer's signature and agency identification; and type of anticoagulant/preservative.
 - ii) The identity and integrity of the sample shall be maintained through collection to analysis and reporting.
 - E) The blood samples shall be delivered to a laboratory certified by the Department.
 - F) The testing laboratory shall utilize one container for the appropriate analysis; the second container shall be retained by that laboratory for a period of at least one (1) year if sufficient sample is submitted.

- G) When drugs other than alcohol are suspected, a urine specimen of approximately 30 ml should accompany the blood sample, but shall not be submitted in lieu of the blood sample. The urine sample shall be collected from the accused's first voiding of the bladder in a manner to preserve the dignity of the individual and the integrity of the sample and in accordance with Section 510.110(c)(1) and (3) and (c).
- b) Blood and urine samples shall be tested to determine the concentration of alcohol and/or other drugs present by a laboratory method acceptable in a court of law.
- c) Urine collection:
 - 1) A urine sample should be considered only when other methods to determine equivalent alcohol concentration in the blood are not practicable, due to the condition of the individual. A specimen of urine, when collected, shall be collected in a manner to preserve the dignity of the individual and to insure the integrity of the sample. When a person is arrested and the arresting officer requests a urine test, the urine sample should be collected according to the following procedures:
 - A) Urine samples shall be collected in the presence of the arresting officer or a representative of the arresting officer's agency who can authenticate the sample. The officer or representative shall be of the same sex as the subject undergoing testing.
 - B) The accused shall empty his/her bladder and the urine be discarded. One-half hour later the accused shall again be requested to void the bladder and the specimen shall be collected in a clean, dry container and dispensed in approximately equal volumes directly into two (2) containers. No preservative shall be used. The containers shall be closed with inert stoppers.
 - C) Each of the individual containers shall be appropriately and securely labeled to provide the following information:
 - i) Name of accused
 - ii) Date and time of collection
 - iii) Collecting attendant
 - iv) Authorizing officer's signature and agency identification
 - 2) The identity and integrity of the samples shall be maintained through collection to analysis and reporting.
 - A) The urine samples shall be delivered directly to a laboratory certified by the Department.

- B) The testing laboratory shall utilize one container for the appropriate analysis; the second container shall be retained by that laboratory for a period of at least one (1) year if sufficient sample is submitted.

- d) Reporting of Results. The original report of the analysis shall be returned to the submitting agency only. A duplicate copy of the report of the analysis shall be retained in the testing laboratory for a period of at least two (2) years. All laboratories shall submit to the Department of Public Health all analyses results of blood and/or urine of drug content, age of individual, without identifying individual. The results of these analyses will be kept by the Department and used only for statistical purposes. Results are to be submitted to the Illinois Department of Public Health, Division of Implied Consent, 535 West Jefferson, Springfield, Illinois 62761.

- e) When the accused requests an additional chemical analysis, he/she may have a physician, or qualified technician, chemist, registered nurse, or other qualified person of their own choosing administer the test. The test must be conducted in accordance with procedures in Section 510.11(a) through (c) except those provisions which require the presence and signature of the arresting officer or his/her representative and those provisions in Section 510.110(a)(2).

Section 510.120

APPROVAL OF LABORATORIES AND LABORATORY TECHNICIANS

- a) Only laboratories certified by the Department and which employ technicians who work under the supervision of a pathologist, toxicologist, or other person who has had at least five years experience in the specialty of analytical chemistry shall be deemed qualified to detect and or quantitate alcohol and/or other drugs in human biologic fluids. The Laboratory Director shall be responsible for the accuracy of all laboratory testing performed in his laboratory.

- b) Prior to laboratory certification, and annually thereafter, the Department shall request the demonstration of proficiency in the performance of the tests by the laboratory through the satisfactory examination of specimens submitted by the Department for this purpose or by participation in a program or programs of proficiency testing conducted by an agency or agencies approved by the Department.

- c) An applicant for certification under this rule shall furnish evidence of competent supervision by a person who meets the qualifications set forth in Section 510.120(a).

- d) Upon evidence that a laboratory has complied with Section 510.120(a)(b), and (c), a letter of certification listing those technicians authorized to perform appropriate tests, shall be issued, and such certification shall be valid for twelve months from the date of issuance by the Department. It may be renewed from year to year upon submission by the holder of the certification of evidence that he continues to perform laboratory analyses for alcohol and/or other drug content in human biologic fluids under the supervision of a person meeting the qualifications set forth in Rule 510.120(a) and upon the Department's determination that the laboratory is satisfactorily complying with Section 510.120(b).

Section 510.130

PRELIMINARY BREATH SCREENING
TEST UNITS (PBT's)

- a) Preliminary breath test units are portable electrically or battery powered units, used to determine if alcohol is present in the tested subject's breath.
- b) Preliminary breath test units offered for sale anywhere within the State to law enforcement agencies must be approved by the Department. No instrument shall be given approval if it demonstrates an error in excess of plus or minus .01. Any instrument which is not approved after initial testing shall be re-tested at the request of the manufacturer.
- c) Preliminary breath test units shall be utilized by law enforcement agencies in accordance with the manufacturer's specifications and operating procedures.
- d) Unit Approval:
- 1) Units listed as Pass/Fail will indicate alcohol levels as follows:
 - A) Green Indicator Light - A Level of .00 to .05,
 - B) Amber Indicator Light - A Level of .051 to .099,
 - C) Red Indicator Light - A level of .10 or higher.
 - 2) Units listed as Digital Read will indicate alcohol levels by numeric indication of two digits (.00) on a visible screen.
 - 3) Units listed as Digital Pass/Fail will indicate levels of alcohol impairment by a numeric or letter message on the unit screen for .05 to .10 levels.

e) Units Approved:

- 1) ALCO-CHEK, Models I and II and Model 3000
All Pass/Fail and Digital Read Models
Manufactured by Approved Technology, Inc., P.O. Box 88094, Grand Rapids, MI 49508
- 2) ALCO-SENSOR
All Pass/Fail, Digital Read and Digital Pass/Fail Models
Manufactured by Intoximeters, Inc., 1901 Locust Street, St. Louis, MO 63101
- 3) S-L2 and S-D2 ALCOHOL ANALYZER
All Pass/Fail and Digital Read Models
Manufactured by National Patent Analytical Systems, Inc., Expressway Plaza Two, Roslyn Heights, NY 11577
- 4) ALERT Model J-4
All Digital Pass/Fail and Digital Read Models
Manufactured by Alcohol Countermeasures Systems, 924 Military Street, Port Huron, MI 48060
- 5) GUTH ALCO-TECTOR
Pass/Fail Model Only
Distributed by Guth Laboratories, Inc. 590 N. 67th Street, Harrisburg, PA 17111

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