



## **STANDARD OPERATING PROCEDURES: EVIDENTIAL BREATH ALCOHOL TESTING**

### **1 Scope**

To describe evidential breath alcohol testing policies and procedures for testing location management, record keeping, and Technical Supervisor proficiency testing.

Any changes which occur as a result of the implementation of these procedures apply only to breath tests which are completed on or after the effective date of this document. Previous policies are not nullified and nothing herein should be construed as limiting or canceling the effect of old policies on tests done under these previous policies.

### **2 Definitions**

**ABA** – An instrument testing sequence which analyzes a series of air blanks and breath samples.

**ACA** – An instrument testing sequence which analyzes a series of air blanks and vapor samples.

**Adjustment** – A set of operations carried out on a measuring system so that it provides prescribed indications corresponding to given values of the quantity to be measured.

**Nominal value** – The rounded or approximate value, which is reported to three digits after the decimal point for a Solution Lot.

**Office of the Scientific Director (OSD)** – The entity created by the Texas Department of Public Safety to carry out the provisions of Texas Administrative Code Title 37 Chapter 19 Breath Alcohol Testing Regulations.

**Reference material** – A homogenous and stable material sufficiently characterized with respect to one or more specified properties, which has been established to be fit for its intended use in a measurement process.

**Simulator** – A device designed to heat an aqueous solution to a specific temperature, used to deliver a vapor sample, usually ethanol, to a breath alcohol testing instrument.

**Solution Lot** – A large volume of reference material that is mixed in a single container and considered to be uniform in concentration once the material is divided into smaller containers.

**Solution Lot number** – A unique designator to document the preparation, analysis and traceability of a reference material or standard.

**Technical Supervisor (TS)** – A forensic scientist certified by the Office of the Scientific Director pursuant to the provisions of Texas Administrative Code Title 37 Chapter 19.

**Traceability** – The property of a measurement result whereby it can be related to a national authoritative standard through an unbroken chain of comparisons with each level having estimated uncertainties.

**Vapor concentration** – The concentration in the vapor above a solution contained in the simulator (expressed in g/210 L).



### **3 Instrument and Testing Location Management**

An instrument inspection shall include the following criteria and may only be conducted at the evidential testing location. An inspection shall be conducted by a TS and includes not only the instrument, but the associated equipment and the test environment.

#### **3.1 Instrumental Procedures**

- A. During an inspection of an Intoxilyzer 9000, the Technical Supervisor must conduct a breath test. Select "Other" as the type of test and enter "**QA INSPECTION**" in the subject last name field. In order for the test to be considered properly completed, the Analytical Report must have all of the following:
  - 1. The Analytical Report must be complete.
  - 2. All air blank results must be 0.000.
  - 3. Subject results must be 0.000.
  - 4. The signature of the Technical Supervisor.
- B. Additional tests or checks of the instrument and/or simulator may be conducted as determined by the Technical Supervisor.
- C. An inspection shall be performed each time an instrument is placed into or returned to service. Additionally, when an Intoxilyzer 9000 is placed into service, conduct an ABA test and transmit a radio frequency signal to ensure radio frequency detection.
- D. Each active testing location should have an inspection performed at least once per calendar month.
- E. The reference solution at each active evidential testing location should be replaced with a new solution at least once per calendar month. The lot number of the solution should be recorded.
- F. The result of an analysis of a reference solution conducted on a certified instrument at an evidential testing location must agree within  $\pm 0.010$  g/210 L of the nominal value.
- G. The Technical Supervisor should note in the Maintenance File when an instrument is removed from service.
- H. Should an inspection not be completed during a calendar month, the tests conducted during that month shall not be automatically invalidated. The Technical Supervisor shall make notification to the appropriate Regional Manager regarding an instrument inspection that was not completed and a determination as to the validity of the tests conducted at the location shall be made by the OSD. A Quality Incident/Action Plan should be initiated, as appropriate.
- I. A Technical Supervisor may conduct an evidential subject test if the need arises. A Technical Supervisor is not required to maintain a separate certification as a breath test operator.



#### **4 Reference Solution Traceability**

- A. The vapor concentration and uncertainty of the alcohol concentration of the solution shall be determined using the Solution Traceability Worksheet (OSD-TST-02) for each reference solution lot.
- B. The nominal value of the reference solution shall be within  $\pm 0.003$  or 3%, whichever is greater, when compared to the vapor concentration of a NIST traceable standard.
- C. Reference solutions should have an expiration date of no more than two years from the date they were prepared.

#### **5 Record Keeping**

The Technical Supervisor is the custodian of all breath testing records. Records in the Instrument Certificate File, Maintenance File, Solution File and Subject File shall be retained for 100 years. Records shall be kept in paper or electronic form separate from the COBRA database.

##### **5.1 Subject File**

- A. All analytical reports shall be maintained and stored in the **Subject File**, including analytical reports generated in the lab and testing locations.
- B. No alterations shall be made to the data on an analytical report.
- C. If an analytical report is missing from the **Subject File**, the Technical Supervisor should make a reasonable effort to retrieve the missing record. If the record is permanently lost, then the record shall be replaced with documentation in relation to the missing record.

##### **5.2 Maintenance File**

- A. Records pertaining to instrument and simulator maintenance and repairs shall be kept in the **Maintenance File**.
- B. Maintenance records should be organized and detailed enough to allow another Technical Supervisor to render an opinion in potential litigation concerning the maintenance history of any instrumentation.
- C. The **Maintenance File** shall contain a copy of required records generated during an inspection of each certified instrument.
- D. For each instrument and simulator, the **Maintenance File** shall contain notes regarding maintenance/repairs and shall include, at a minimum, the following:
  - 1. The name, serial number, or other identifying information of the equipment.
  - 2. Date the maintenance was performed.
  - 3. The individual who performed the maintenance.
  - 4. Documentation of what maintenance was performed.
- E. If abbreviations or codes are used to document instrument and simulator maintenance, the **Maintenance File** shall contain a document clearly defining all abbreviations or codes used.



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- F. The **Maintenance File** shall contain any other documents kept in the normal course of business by the Technical Supervisor regarding the maintenance of instruments and simulators.

### **5.3 Solution File**

- A. Records pertaining to reference solutions used at evidential testing locations shall be kept in the **Solution File**.
- B. These documents should include, but are not limited to, the Certificate of Analysis and Solution Traceability Worksheet.

## **6 Proficiency Testing**

- A. Once per calendar year all certified Technical Supervisors will be proficiency tested on their ability to prepare a solution of a concentration prescribed by the OSD.
- B. The proficiency procedure will be provided to each Technical Supervisor being tested.
- C. Proficiency solutions submitted by the Technical Supervisor will be analyzed by the Texas DPS CRM laboratory.
- D. To pass the proficiency test, the vapor concentration of the solution must be within  $\pm 0.0030$  or 3%, whichever is greater, of the prescribed concentration.
- E. Any Technical Supervisor who is unsuccessful on the first attempt will be asked to submit another proficiency solution and given a new due date for submission. If the second attempt is unsuccessful, the Technical Supervisor will be asked to come to the OSD to demonstrate their ability to prepare solutions and for remedial training, if necessary. Any unsuccessful proficiency attempt will be documented as a Quality Incident.
- F. A Proficiency Assessment Report will be issued to each Technical Supervisor who completes a proficiency test. The Proficiency Assessment Report will be designated as "Satisfactory", or "Unsatisfactory" and additional information will be documented, as necessary.



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Version #	Effective Date	Brief Description of Change(s)
00	03/01/2013	Original Issue; Standard Operating Guidelines for Technical Supervisors (1/30/2012)
00a	03/01/2013	Minor revisions- Administrative
01	09/27/2013	Major Revision: Sections 4, 6, 7
02	08/24/2015	Major Revision – All Sections
03	12/07/2015	Major Revision – Section 3.1
04	9/12/2016	Major Revision – Sections 3.1, 4, 5
05	09/01/2017	Major Revision – Sections 3.1 and 6