

Florida Department of Law Enforcement

Alcohol Testing Program

INSTRUMENT EVALUATION PROCEDURES

The following procedures will be used to evaluate breath test instrumentation for approval for use in Florida. The results of an evaluation shall note any deviation or change in the evaluation procedures and the reasons for such deviation or change.

1. Only breath test instruments listed on the US Department of Transportation Conforming Products List of Evidential Breath Measurement Devices will be evaluated.
2. Results of all evaluations shall record:
 - a. The purpose for and subject of the evaluation.
 - b. The evaluation location and personnel involved.
 - c. The make, model and serial numbers of instruments.
 - d. The make, model and serial numbers, and the operating conditions of any external equipment and instrumentation (such as simulators) used.
 - e. A conclusion based on evaluation results, including any need for additional information, and the reasons for such conclusion.
3. Each instrument evaluated must be calibrated by the manufacturer or an authorized repair facility prior to evaluation.
4. Each instrument will be evaluated for accuracy and precision by analyzing at least twenty-five repetitions at each of the following alcohol concentrations: 0.00 g/210L, 0.05 g/210L, 0.08 g/210L, and 0.20 g/210L.
 - a. The 0.00 g/210L test will be conducted by analyzing a reference sample device (simulator) containing 500 mL of distilled or deionized water. The results of the 0.00 g/210L must all be 0.000 g/210L;
 - b. The 0.05 g/210L test will be conducted by analyzing a simulator containing a 0.05 g/210L alcohol reference solution. The results of the 0.05 g/210L test must fall within the acceptable range: 0.045 to 0.055 g/210L;
 - c. The 0.08 g/210L test will be conducted by analyzing a simulator containing a 0.08 g/210L alcohol reference solution. The results of the 0.08 g/210L test must fall within the acceptable range: 0.075 to 0.085 g/210L;
 - d. The 0.20 g/210L test will be conducted by analyzing a simulator containing a 0.20 g/210L alcohol reference solution. The results of the 0.20 g/210L test must fall within the acceptable range: 0.190 to 0.210 g/210L; and
 - e. The 0.08 g/210L dry gas standard test will be conducted by analyzing a 0.08 g/210L dry gas standard. The results of the 0.08 g/210L dry gas standard test must fall within acceptable range: 0.075 to 0.085 g/210L.
 - f. In order to establish the precision of an evaluated instrument, the average standard deviation for the 0.05, 0.08 and 0.20 g/210L results will be calculated and must not exceed the manufacturer's specifications for precision.
5. Each instrument will be evaluated for its capability to detect the presence of an interferent and mouth alcohol. Each instrument evaluated will be subjected to at least twenty-five repetitions of an acetone interference test and at least twenty-five repetitions of a mouth alcohol test.
 - a. The interferent test will be conducted by analyzing simulator containing 500 mL deionized or distilled water with 3 mL of acetone stock solution added. The results must be 0.000 g/210L and the acetone detected by the correct instrument response(s) prescribed by the manufacturer to denote the interferent.
 - b. The mouth alcohol test will be conducted by analyzing a breath sample after the mouth has been rinsed with mouth alcohol solution. The breath sample must be detected by the correct instrument response(s) prescribed by the manufacturer to denote mouth alcohol.
6. Each lot of alcohol reference solution and each cylinder of dry gas standard used in the evaluation process shall meet the requirements of Chapter 11D-8, FAC.
7. The Department will determine whether to conduct additional tests or studies necessary to evaluate previously approved instrumentation, and whether to conduct additional evaluations for quality assurance or research purposes. The procedures used and the results obtained will be recorded.