



Florida Department of Law Enforcement

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MEMORANDUM

TO: Alcohol Testing Program Department Inspectors

FROM: Laura D. Barfield, Alcohol Testing Program Manager **LDB**

DATE: November 30, 2005

SUBJECT: CMI, Inc. Intoxilyzer 8000 Instrumentation Evaluation – April 2005

Attached you will find the CMI, Inc. Intoxilyzer 8000 Instrumentation Evaluation Report dated November 30, 2005. The report was generated using data obtained during the evaluation conducted on April 19, 2005 in accordance with applicable rules and forms in effect at that time.

Based on the Program's review of this evaluation, the CMI, Inc. Intoxilyzer 8000 remains approved for evidentiary use in Florida. If you have any questions, please feel free to contact me.

LDB

Attachments

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Criminal Justice Professionalism Program
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**CMI, Inc. Intoxilyzer 8000
Instrumentation Evaluation Report**

Report Prepared November 30, 2005

**Evaluation Conducted April 19, 2005
Jacksonville, Florida
Florida Department of Law Enforcement
Alcohol Testing Program**

CMI, Inc. Intoxilyzer 8000 Instrumentation Evaluation

**Conducted in Accordance with Chapter 11D-8, FAC December 2004 and corresponding FDLE/ATP Form 34
Instrument Evaluation Procedures**

Introduction

In order to be considered valid under Florida law, the analysis of a person's breath must have been administered substantially in accordance with methods and procedures approved by the Florida Department of Law Enforcement (FDLE), using instrumentation approved by FDLE. The FDLE Alcohol Testing Program has been granted specific and exclusive statutory authority to ensure the accuracy and reliability of breath alcohol test results and to approve breath test instrumentation and methods of breath analysis. The process for evaluation of breath test instrumentation for evidentiary use in Florida is prescribed by Chapter 11D-8, Florida Administrative Code.

Purpose

The purpose of this evaluation is to assess capabilities of the CMI, Inc. Intoxilyzer Model 8000 breath test instrumentation using infrared light absorption as the method of analysis, and to evaluate software version 8100.24 for evidentiary use in the State of Florida. The evaluation process ensures that the methodology utilized by the breath test instrumentation provides accurate and scientifically reliable analytical results. Evaluations are not intended to approve individual parts or components of the breath test instrumentation.

Testing Location and Operating Conditions

Testing Location: Florida Department of Law Enforcement
Jacksonville Regional Operations Center
921 North Davis Street, Building E
Jacksonville, Florida 32209

Operating Conditions: 70 to 75° F

FDLE Personnel Present During the Evaluation

Laura D. Barfield, Program Manager
Rafael E. Madrigal, Assistant General Counsel
Matthew E. Malhiot, Regional Inspector
Dwite N. Hackney, Department Inspector
George L. Venturi, Department Inspector
Warren H. Sanger, Department Inspector
Roger G. Skipper, Department Inspector
Donald P. Suereth, Department Inspector
Stephen N. Neff, Department Inspector

Make, Model and Serial Number of Instrumentation

CMI, Inc. Intoxilyzer 8000, Serial Number 80-001173
CMI, Inc. Intoxilyzer 8000, Serial Number 80-001175
CMI, Inc. Intoxilyzer 8000, Serial Number 80-001181

Instrumentation Description

- Make and Model Designation: Intoxilyzer 8000, listed on the US Department of Transportation Conforming Products List of Evidential Breath Measurement Devices.
- Method of Analysis: Non-dispersive infrared absorption
- Software Version: 8100.24

- Description of Instrumentation: An infrared-based instrument designed for both mobile and stationary evidential breath alcohol testing.
- Specification for Precision: Average Standard deviation of 0.003 g/210L or better
- Response Prescribed to Denote an Interferent: Display INTERFERENT DETECT and a high/low tone will sound
- Response Prescribed to Denote Mouth Alcohol: Display SLOPE NOT MET and a high/low tone will sound

Equipment and Supplies

Reference Sample Devices (Simulators)

Fifteen (15) reference sample devices (simulators) were used during this evaluation. All simulators were operated within $34 \pm 0.2\text{C}$ and had air leak resistant seals. The make, model and serial number of each simulator is outlined in Appendix A.

Digital Thermometers

Five (5) digital thermometers were used during this evaluation. All digital thermometers were operated according to manufacturer's specifications. The make, model and serial number of each digital thermometer is outlined in Appendix A.

External Printers

A total of three (3) external printers were used during this evaluation. The make, model and serial number of each external printer is outlined in Appendix A.

Standards, Solutions, and Distilled Water

All alcohol reference solutions were analyzed by the Florida Department of Law Enforcement in accordance with Rule 11D-8.0035(2)(a), FAC. The dry gas standard was prepared and certified by Scott Specialty Gases, Inc. The results of the alcohol reference solution analyses and the certified concentration of the dry gas standard are outlined in Appendix B. Acetone Stock Solution, Lot Number 2004-C, and Mouth Alcohol Solution, Lot Number 2004-A, prepared and analyzed by the Florida Department of Law Enforcement were used for the acetone interference tests and the mouth alcohol tests, respectively. Crystal Springs distilled water was analyzed by gas chromatography subsequent to the evaluation.

Other Supplies

All other supplies and equipment used were commercially available and compatible with this type of instrumentation (printer tape, mouthpieces, tubing, office supplies, etc.).

Evaluation

0.00 g/210L Test, Acetone Interference Test and Mouth Alcohol Test

All Intoxilyzer 8000 instrumentation was subjected to twenty-five (25) repetitions of a 0.00 g/210L test, twenty-five (25) repetitions of an acetone interference test, and twenty-five repetitions of a mouth alcohol test. The results are outlined in Appendix C-1, C-2 and C-3.

Alcohol Reference Solution Analyses

All Intoxilyzer 8000 instrumentation was subjected to twenty-five (25) repetitions of alcohol reference solution analyses at each of the following concentrations: 0.05, 0.08, 0.20 g/210L. The results are outlined in Appendix C-1, C-2 and C-3.

Dry Gas Standard Analyses

All Intoxilyzer 8000 instrumentation was subjected to twenty-five (25) repetitions of dry gas standard analyses at the following concentration: 0.08 g/210L. The results are outlined in Appendix C-1, C-2 and C-3.

Analytical Results

All results met the requirements of FDLE/ATP Form 34 Instrument Evaluation Procedures for accuracy, precision, and correct instrument responses as prescribed by the manufacturer.

Conclusion

The results of this evaluation establish that the CMI, Inc. Intoxilyzer 8000 instrument produces accurate and reliable breath alcohol test results using software 8100.24. Based on the results of this evaluation, the CMI, Inc. Intoxilyzer 8000 remains approved for use as an evidentiary breath test instrument in the State of Florida.

APPENDIX A

External Equipment

Reference Sample Devices (Simulators)

Make	Model	Serial Number
Guth	10-4D	SD1024
Guth	10-4D	SD1011
Guth	10-4D	SD1012
Guth	10-4D	SD1013
Guth	10-4D	SD1014
Guth	10-4D	SD1017
Guth	10-4D	SD1023
Guth	10-4D	SD1020
Guth	10-4D	SD1025
Guth	10-4D	SD1018
Guth	34C	G6621
Guth	34C	G2840
Guth	34C	G11621
Guth	210021	DR1280
Guth	210021	DR1279

Digital Thermometers

Make	Model	Serial Number
Ertco-Eutechnics	4400	300502
Ertco-Eutechnics	4400	300948
Ertco-Eutechnics	4400	300504
Ertco-Eutechnics	4400	300505
Ertco-Eutechnics	4400	300918

External Printers

Make	Model	Serial Number
Samsung	ML-1750	BKDXB11895B
Samsung	ML-1750	BAAX303828
Hewlett Packard	HP1200	CNBJK48741

APPENDIX B

Standards

Alcohol Reference Solution

	0.050 g/210L (g/100mL)	0.080 g/210L (g/100mL)	0.200 g/210L (g/100mL)
Source	Alcohol Countermeasure Systems, Inc.	Alcohol Countermeasure Systems, Inc.	Alcohol Countermeasure Systems, Inc.
Lot Number	200411C	200411G	200411D
Manufacture Date	11/4/2004	11/18/2004	11/4/2004
Expiration Date	11/4/2006	11/18/2006	11/4/2006
Target Concentration (g/100mL)	0.0605	0.0968	0.2420
Acceptable Range (g/100mL)	0.0586 to 0.0623	0.0938 to 0.0997	0.2347 to 0.2492
1	0.0609	0.0978	0.2429
2	0.0609	0.0979	0.2422
3	0.0607	0.0980	0.2422
4	0.0608	0.0983	0.2420
5	0.0612	0.0980	0.2434
6	0.0611	0.0975	0.2418
7	0.0611	0.0980	0.2431
8	0.0609	0.0982	0.2423
9	0.0618	0.0981	0.2431
10	0.0609	0.0980	0.2436
11	0.0609	0.0977	0.2420
12	0.0610	0.0978	0.2435
13	0.0610	0.0980	0.2415
14	0.0615	0.0978	0.2436
15	0.0612	0.0978	0.2433
16	0.0604	0.0975	0.2426
17	0.0608	0.0979	0.2426
18	0.0610	0.0977	0.2424
19	0.0615	0.0979	0.2427
20	0.0611	0.0978	0.2431
Mean	0.0610	0.0979	0.2427
Std Dev	0.0003	0.0002	0.0006
Minimum	0.0604	0.0975	0.2415
Maximum	0.0618	0.0983	0.2436

Dry Gas Standard

Manufacturer	Lot Number	Expiration Date	Certified Concentration
Scott Specialty Gases, Inc.	504502I	2/17/2007	0.080 g/210L

APPENDIX C-1
Analytical Results
80-001173

	0.00 g/210L Test (g/210L)	0.05 g/210L Test (g/210L)	0.08 g/210L Test (g/210L)	0.20 g/210L Test (g/210L)	0.08 g/210L (g/210L) Dry Gas Std Test	Acetone Interference Test	Mouth Alcohol Test
1	0.000	0.049	0.080	0.197	0.080	INT*	SNM*
2	0.000	0.052	0.082	0.198	0.079	INT*	SNM*
3	0.000	0.052	0.082	0.199	0.080	INT*	SNM*
4	0.000	0.052	0.081	0.198	0.080	INT*	SNM*
5	0.000	0.052	0.082	0.198	0.080	INT*	SNM*
6	0.000	0.052	0.082	0.198	0.080	INT*	SNM*
7	0.000	0.051	0.082	0.198	0.080	INT*	SNM*
8	0.000	0.052	0.081	0.197	0.080	INT*	SNM*
9	0.000	0.051	0.082	0.198	0.080	INT*	SNM*
10	0.000	0.051	0.082	0.198	0.080	INT*	SNM*
11	0.000	0.052	0.082	0.198	0.080	INT*	SNM*
12	0.000	0.051	0.081	0.197	0.080	INT*	SNM*
13	0.000	0.051	0.081	0.197	0.080	INT*	SNM*
14	0.000	0.051	0.081	0.197	0.080	INT*	SNM*
15	0.000	0.051	0.082	0.198	0.080	INT*	SNM*
16	0.000	0.051	0.082	0.198	0.080	INT*	SNM*
17	0.000	0.051	0.082	0.198	0.080	INT*	SNM*
18	0.000	0.051	0.082	0.197	0.080	INT*	SNM*
19	0.000	0.052	0.082	0.197	0.080	INT*	SNM*
20	0.000	0.051	0.082	0.198	0.081	INT*	SNM*
21	0.000	0.052	0.082	0.199	0.081	INT*	SNM*
22	0.000	0.052	0.082	0.198	0.080	INT*	SNM*
23	0.000	0.052	0.082	0.198	0.080	INT*	SNM*
24	0.000	0.052	0.081	0.199	0.080	INT*	SNM*
25	0.000	0.051	0.082	0.198	0.080	INT*	SNM*
Mean		0.051	0.082	0.198	0.080		
Std Dev		0.0007	0.0006	0.0006	0.0004		
Minimum		0.049	0.080	0.197	0.079		
Maximum		0.052	0.082	0.199	0.081		

Average Standard Deviation: 0.0006

Comments: INT* = Interferent Detect
SNM* = Slope Not Met

APPENDIX C-2
Analytical Results
80-001175

	0.00 g/210L Test (g/210L)	0.05 g/210L Test (g/210L)	0.08 g/210L Test (g/210L)	0.20 g/210L Test (g/210L)	0.08 g/210L (g/210L) Dry Gas Std Test	Acetone Interference Test	Mouth Alcohol Test
1	0.000	0.050	0.079	0.197	0.079	INT*	SNM*
2	0.000	0.050	0.080	0.197	0.080	INT*	SNM*
3	0.000	0.050	0.079	0.198	0.080	INT*	SNM*
4	0.000	0.050	0.079	0.198	0.080	INT*	SNM*
5	0.000	0.050	0.079	0.198	0.080	INT*	SNM*
6	0.000	0.050	0.080	0.197	0.080	INT*	SNM*
7	0.000	0.050	0.080	0.197	0.080	INT*	SNM*
8	0.000	0.050	0.080	0.198	0.081	INT*	SNM*
9	0.000	0.050	0.080	0.197	0.081	INT*	SNM*
10	0.000	0.051	0.080	0.198	0.081	INT*	SNM*
11	0.000	0.051	0.079	0.197	0.080	INT*	SNM*
12	0.000	0.050	0.080	0.198	0.081	INT*	SNM*
13	0.000	0.051	0.079	0.198	0.081	INT*	SNM*
14	0.000	0.051	0.080	0.197	0.081	INT*	SNM*
15	0.000	0.050	0.080	0.197	0.081	INT*	SNM*
16	0.000	0.051	0.080	0.197	0.081	INT*	SNM*
17	0.000	0.050	0.080	0.197	0.080	INT*	SNM*
18	0.000	0.050	0.080	0.197	0.082	INT*	SNM*
19	0.000	0.050	0.081	0.198	0.081	INT*	SNM*
20	0.000	0.050	0.081	0.197	0.081	INT*	SNM*
21	0.000	0.051	0.080	0.197	0.080	INT*	SNM*
22	0.000	0.050	0.080	0.197	0.081	INT*	SNM*
23	0.000	0.051	0.080	0.198	0.080	INT*	SNM*
24	0.000	0.050	0.080	0.197	0.080	INT*	SNM*
25	0.000	0.051	0.080	0.196	0.081	INT*	SNM*
Mean		0.050	0.080	0.197	0.081		
Std Dev		0.0005	0.0006	0.0006	0.0007		
Minimum		0.050	0.079	0.196	0.079		
Maximum		0.051	0.081	0.198	0.082		

Average Standard Deviation: 0.0006

Comments: INT* = Interferent Detect
SNM* = Slope Not Met

APPENDIX C-3
Analytical Results
80-001181

	0.00 g/210L Test (g/210L)	0.05 g/210L Test (g/210L)	0.08 g/210L Test (g/210L)	0.20 g/210L Test (g/210L)	0.08 g/210L (g/210L) Dry Gas Std Test	Acetone Interference Test	Mouth Alcohol Test
1	0.000	0.049	0.080	0.201	0.079	INT*/INT*	SNM*
2	0.000	0.049	0.080	0.200	0.079	INT*/INT*	SNM*
3	0.000	0.050	0.081	0.201	0.079	INT*/INT*	SNM*
4	0.000	0.050	0.080	0.200	0.080	INT*/INT*	SNM*
5	0.000	0.050	0.081	0.200	0.080	INT*/INT*	SNM*
6	0.000	0.050	0.081	0.200	0.081	INT*/INT*	SNM*
7	0.000	0.049	0.080	0.201	0.080	INT*/INT*	SNM*
8	0.000	0.050	0.080	0.200	0.080	INT*/INT*	SNM*
9	0.000	0.050	0.081	0.201	0.080	INT*/INT*	SNM*
10	0.000	0.050	0.080	0.199	0.080	INT*/INT*	SNM*
11	0.000	0.049	0.080	0.201	0.080	INT*/INT*	SNM*
12	0.000	0.050	0.080	0.200	0.080	INT*/INT*	SNM*
13	0.000	0.050	0.081	0.201	0.080	INT*/INT*	SNM*
14	0.000	0.049	0.080	0.200	0.080	INT*/INT*	SNM*
15	0.000	0.050	0.080	0.200	0.080	INT*/INT*	SNM*
16	0.000	0.050	0.080	0.200	0.080	INT*/INT*	SNM*
17	0.000	0.049	0.081	0.200	0.080	INT*/INT*	SNM*
18	0.000	0.049	0.081	0.200	0.080	0.000/INT*	SNM*
19	0.000	0.050	0.081	0.200	0.081	INT*/INT*	SNM*
20	0.000	0.049	0.081	0.200	0.081	INT*/INT*	SNM*
21	0.000	0.049	0.080	0.200	0.081	INT*/INT*	SNM*
22	0.000	0.050	0.081	0.200	0.080	INT*/INT*	SNM*
23	0.000	0.050	0.080	0.199	0.080	INT*/INT*	SNM*
24	0.000	0.050	0.081	0.199	0.080	0.000/INT*	SNM*
25	0.000	0.050	0.080	0.199	0.080	INT*/INT*	SNM*
Mean		0.050	0.080	0.200	0.080		
Std Dev		0.0005	0.0005	0.0006	0.0005		
Minimum		0.049	0.080	0.199	0.079		
Maximum		0.050	0.081	0.201	0.081		

Average Standard Deviation: 0.0005

Comments: INT* = Interferent Detect
SNM* = Slope Not Met

Note: Acetone Interference Test repeated. Acetone stock solution was weak. The cap on the acetone stock solution used was not properly sealed during storage. New bottle of acetone stock solution was used. The results are reported First Analyses/Second Analyses. The results of all 25 repetitions on the second analyses are acceptable.