Florida Department of
Law Enforcement

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**MEMORANDUM**

TO: Department Inspectors

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

DATE: January 22, 2013

SUBJECT: CMI Inc. Intoxilyzer 8000 Instrumentation Evaluation Report – October 2006 Amended January 2013

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Attached you will find the CMI, Inc. Intoxilyzer 8000 Instrumentation Evaluation Report dated November 25, 2006, and amended January 22, 2013. The report was originally generated using data obtained during the evaluation conducted on October 9, 2006, in accordance with applicable rules and forms in effect at that time. The Purpose, Instrumentation Used and Conclusion sections of the report are being amended January 22, 2013, to document features/updates to the instrument that were also evaluated.

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; and
- Effective October 9, 2006, software version 8100.27 has been evaluated in accordance with Instrument Evaluation Procedures FDLE/ATP Form 34 Revised March 2004, and meets the requirements of Rule 11D-8.003(2), Florida Administrative Code.

If you have any questions, please feel free to contact me.

LDB

Attachments

# Florida Department of Law Enforcement
# Alcohol Testing Program

# CMI, Inc. Intoxilyzer 8000
# Instrumentation Evaluation Report

**Report Prepared November 25, 2006**
**AMENDED**
**January 22, 2013**

**October 9, 2006**
**Orlando, Florida**

# CMI, Inc. Intoxilyzer 8000
# Instrumentation Evaluation Report
### Conducted in Accordance with Chapter 11D-8, FAC March 2006 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 CMI, Inc. Intoxilyzer 8000 was approved for evidentiary use by the Florida Department of Law Enforcement Alcohol Testing Program on November 5, 2002. The purpose of this evaluation is to assess the CMI, Inc. Intoxilyzer 8000, using infrared light absorption as the method of analysis and the following software:

- Software version 8100.27 for evidentiary use in 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<br>Orlando Regional Operations Center<br>500 West Robinson Street<br>Orlando, FL 32801 |
| Operating Conditions: | Indoors, 71 - 73$^0$ F |

### FDLE Personnel Present During the Evaluation

Laura D. Barfield, Program Manager
Sharon S. Traxler, Assistant General Counsel
Matthew E. Malhiot, Department Inspector
Roger G. Skipper, Department Inspector
Donald P. Suereth, Department Inspector

### Instrumentation Used

The following Intoxilyzer 8000 breath test instruments were provided on loan by the manufacturer, CMI, Inc.

- **CMI, Inc. Intoxilyzer 8000, Serial Number 80-001173**: Exhaust block assembly – hole in check valve; Four (4) rubber feet; No shrink wrap cover on the ends of the breath hose; No room temperature vulcanization (RTV) applied to the power supply coils; No update to case mold – case part number(s) cover (top) 440980 and chassis (bottom) 440988; No update to

ring detect capacitor – 0.047 Microfarad; 2MB memory storage capacity; Update to screw securing check valve housing in exhaust block assembly – 5mm screw; No update to system board – part number 310338E.

- **CMI, Inc. Intoxilyzer 8000, Serial Number 80-001175**: Exhaust block assembly – hole in check valve; Four (4) rubber feet; Shrink wrap cover on both ends of the breath hose; Room temperature vulcanization (RTV) applied to the power supply coils; Update to case mold – case number(s) cover (top) 440980 Rev B and chassis (bottom) 440988 Rev A; Update to ring detect capacitor – 0.47 Microfarad; 2MB memory storage capacity; Update to screw securing check valve housing in exhaust block assembly – 5mm screw; Update to system board – part number 310338G.
- **CMI, Inc. Intoxilyzer 8000, Serial Number 80-001181**: Exhaust block assembly – hole in check valve; Four (4) rubber feet; No shrink wrap cover on the ends of the breath hose; No room temperature vulcanization (RTV) applied to the power supply coils; No update to case mold – case part number(s) cover (top) 440980 and chassis (bottom) 440988; No update to ring detect capacitor – 0.047 Microfarad; 1MB memory storage capacity; 5mm screw securing check valve housing in exhaust block assembly; No update to system board – part number 310338E.

**Instrumentation Description**

- Make and Model Designation: CMI, Inc. Intoxilyzer 8000, listed on the US Department of Transportation Conforming Products List of Evidential Breath Measurement Devices.
- Method of Analysis: Non-dispersive infrared light absorption.
- Software Version: 8100.27
- 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)*

All simulators were operated within 34 $\pm$ 0.2C and had air leak resistant seals. The make, model and serial number of each simulator is outlined in Appendix A.

*Digital Thermometer*

The make, model and serial number of the digital thermometer is outlined in Appendix A.

*External Printers*

The make, model and serial number of each external printer is outlined in Appendix A.

*External Printer Switch*

The make, model and serial number of each external printer switch is outlined in Appendix A.

*Standards, Solutions, and Deionized 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 2006-D, and Mouth Alcohol Solution, Lot Number 2006-A, prepared and analyzed by the Florida Department of Law Enforcement were used for the

acetone interference tests and the mouth alcohol tests, respectively. Deionized water obtained from the FDLE Tallahassee Regional Operations Center Laboratory was analyzed by gas chromatography prior 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.).

## Procedures

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

The 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, Appendix C-2, and Appendix C-3.

**Alcohol Reference Solution Analyses**

The 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, Appendix C-2, and Appendix C-3.

**Dry Gas Standard Analyses**

The 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, Appendix C-2, and Appendix 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 evidentiary breath test instrument, using software version 8100.27, produces accurate and reliable breath alcohol test results.

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; and
- Effective October 9, 2006, software version 8100.27 has been evaluated in accordance with Instrument Evaluation Procedures FDLE/ATP Form 34 Revised March 2004, and meets the requirements of Rule 11D-8.003(2), Florida Administrative Code.

# APPENDIX A

## External Equipment

### Reference Sample Devices (Simulators)

| Make | Model | Serial Number |
|---|---|---|
| Guth | 34C | G3709 |
| Guth | 34C | G2407 |
| Guth | 34C | G2879 |
| Guth | 34C | G8152 |
| Guth | 34C | G11621 |
| Guth | 10-4D | SD1018 |
| Guth | 10-4D | SD1011 |
| Guth | 10-4D | SD1022 |
| Guth | 34C | G2883 |
| Guth | 34C | G2840 |
| Guth | 210021 | DR1280 |
| Guth | 210021 | DR1279 |
| Guth | 10-4D | SD1016 |
| Guth | 10-4D | SD1015 |
| Guth | 10-4D | SD1025 |

### Digital Thermometers

| Make | Model | Serial Number |
|---|---|---|
| Ertco-Eutechnics | 5500 | 300505 |

### External Printers

| Make | Model | Serial Number |
|---|---|---|
| Samsung | ML1750 | BAAX303958M |
| Brother | HL-2070N | U61230G6J169439 |

### External Printer Switch

| Make | Model | Serial Number |
|---|---|---|
| Belkin Bitronics | F1U126 | 3045341496 |

# APPENDIX B

## Alcohol Reference Solution

| | 0.05 g/210L (g/100mL) | 0.08 g/210L (g/100mL) | 0.20 g/210L (g/100mL) | 0.20 g/210L (g/100mL) |
|---|---|---|---|---|
| **Source** | Alcohol Countermeasure Systems, Inc. | Alcohol Countermeasure Systems, Inc. | Alcohol Countermeasure Systems, Inc. | Alcohol Countermeasure Systems, Inc. |
| **Lot Number** | 200605B | 200509B | 200509C | 200505C |
| **Manufacture Date** | 5/4/2006 | 9/22/2005 | 9/22/2005 | 5/5/2005 |
| **Expiration Date** | 5/4/2008 | 9/22/2007 | 9/22/2007 | 5/5/2007 |
| **Approval Date** | 7/9/2006 | 11/17/2005 | 11/17/2005 | 6/7/2005 |
| **Target Concentration (g/100mL)** | 0.0605 | 0.0968 | 0.2420 | 0.2420 |
| **Acceptable Range (g/100mL)** | 0.0586 to 0.0623 | 0.0938 to 0.0997 | 0.2347 to 0.2492 | 0.2347 to 0.2492 |
| **1** | 0.0608 | 0.0973 | 0.2457 | 0.2468 |
| **2** | 0.0607 | 0.0976 | 0.2459 | 0.2479 |
| **3** | 0.0605 | 0.0978 | 0.2473 | 0.2485 |
| **4** | 0.0603 | 0.0987 | 0.2444 | 0.2468 |
| **5** | 0.0607 | 0.0982 | 0.2456 | 0.2474 |
| **6** | 0.0607 | 0.0972 | 0.2446 | 0.2471 |
| **7** | 0.0608 | 0.0972 | 0.2456 | 0.2482 |
| **8** | 0.0608 | 0.0980 | 0.2459 | 0.2472 |
| **9** | 0.0604 | 0.0981 | 0.2462 | 0.2480 |
| **10** | 0.0608 | 0.0976 | 0.2456 | 0.2482 |
| **11** | 0.0603 | 0.0971 | 0.2464 | 0.2472 |
| **12** | 0.0604 | 0.0973 | 0.2458 | 0.2476 |
| **13** | 0.0607 | 0.0972 | 0.2451 | 0.2483 |
| **14** | 0.0610 | 0.0968 | 0.2448 | 0.2478 |
| **15** | 0.0605 | 0.0977 | 0.2455 | 0.2479 |
| **16** | 0.0610 | 0.0972 | 0.2453 | 0.2477 |
| **17** | 0.0602 | 0.0979 | 0.2467 | 0.2489 |
| **18** | 0.0609 | 0.0970 | 0.2461 | 0.2472 |
| **19** | 0.0602 | 0.0972 | 0.2460 | 0.2476 |
| **20** | 0.0605 | 0.0973 | 0.2474 | 0.2465 |
| **Mean** | 0.0606 | 0.0975 | 0.2458 | 0.2476 |
| **Std Dev** | 0.0003 | 0.0005 | 0.0008 | 0.0006 |
| **Minimum** | 0.0602 | 0.0968 | 0.2444 | 0.2465 |
| **Maximum** | 0.0610 | 0.0987 | 0.2474 | 0.2489 |

## Dry Gas Standard

| Manufacturer | Lot Number | Expiration Date | Certified Concentration |
|---|---|---|---|
| Scott Specialty Gases, Inc. | 615802I | June 9, 2008 | 0.080 g/210L |
| Scott Specialty Gases, Inc. | 618801I | July 10, 2008 | 0.080 g/210L |
| Scott Specialty Gases, Inc. | 518702I | July 8, 2007 | 0.080 g/210L |

# APPENDIX C-1
## Analytical Results
## Intoxilyzer 8000 S.N. 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)[1] | 0.08 g/210L (g/210L) Dry Gas Std Test | Acetone Interference Test *= Interferent Detect | Mouth Alcohol Test *= Slope Not Met |
|---|---|---|---|---|---|---|---|
| 1 | 0.000 | 0.049 | 0.079 | 0.200 | 0.079 | INT* | SNM* |
| 2 | 0.000 | 0.050 | 0.079 | 0.201 | 0.079 | INT* | SNM* |
| 3 | 0.000 | 0.050 | 0.080 | 0.201 | 0.079 | INT* | SNM* |
| 4 | 0.000 | 0.051 | 0.080 | 0.202 | 0.079 | INT* | SNM* |
| 5 | 0.000 | 0.050 | 0.080 | 0.201 | 0.079 | INT* | SNM* |
| 6 | 0.000 | 0.050 | 0.081 | 0.202 | 0.080 | INT* | SNM* |
| 7 | 0.000 | 0.050 | 0.080 | 0.202 | 0.079 | INT* | SNM* |
| 8 | 0.000 | 0.050 | 0.081 | 0.202 | 0.080 | INT* | SNM* |
| 9 | 0.000 | 0.051 | 0.081 | 0.202 | 0.079 | INT* | SNM* |
| 10 | 0.000 | 0.050 | 0.081 | 0.201 | 0.080 | INT* | SNM* |
| 11 | 0.000 | 0.049 | 0.081 | 0.202 | 0.079 | INT* | SNM* |
| 12 | 0.000 | 0.051 | 0.080 | 0.201 | 0.080 | INT* | SNM* |
| 13 | 0.000 | 0.051 | 0.080 | 0.202 | 0.080 | INT* | SNM* |
| 14 | 0.000 | 0.050 | 0.080 | 0.201 | 0.080 | INT* | SNM* |
| 15 | 0.000 | 0.051 | 0.080 | 0.202 | 0.080 | INT* | SNM* |
| 16 | 0.000 | 0.051 | 0.081 | 0.202 | 0.079 | INT* | SNM* |
| 17 | 0.000 | 0.050 | 0.080 | 0.201 | 0.079 | INT* | SNM* |
| 18 | 0.000 | 0.050 | 0.080 | 0.202 | 0.079 | INT* | SNM* |
| 19 | 0.000 | 0.051 | 0.080 | 0.201 | 0.080 | INT* | SNM* |
| 20 | 0.000 | 0.051 | 0.080 | 0.202 | 0.079 | INT* | SNM* |
| 21 | 0.000 | 0.051 | 0.080 | 0.202 | 0.080 | INT* | SNM* |
| 22 | 0.000 | 0.050 | 0.080 | 0.202 | 0.080 | INT* | SNM* |
| 23 | 0.000 | 0.051 | 0.080 | 0.202 | 0.080 | INT* | SNM* |
| 24 | 0.000 | 0.050 | 0.080 | 0.201 | 0.080 | INT* | SNM* |
| 25 | 0.000 | 0.050 | 0.080 | 0.202 | 0.080 | INT* | SNM* |
| 26 | | | | 0.202 | | | |
| 27 | | | | 0.201 | | | |
| 28 | | | | 0.201 | | | |
| 29 | | | | 0.201 | | | |
| 30 | | | | 0.202 | | | |
| Mean | | 0.050 | 0.080 | 0.202 | 0.080 | | |
| Std Dev | | 0.0006 | 0.0006 | 0.0006 | 0.0005 | | |
| Minimum | | 0.049 | 0.079 | 0.200 | 0.079 | | |
| Maximum | | 0.051 | 0.081 | 0.202 | 0.080 | | |

**Average Standard Deviation:** **0.0006**

[1]An additional five (5) analyses were inadvertently conducted.

# APPENDIX C-2
## Analytical Results
## Intoxilyzer 8000 S.N. 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 * = Interferent Detect | Mouth Alcohol Test * = Slope Not Met |
|---|---|---|---|---|---|---|---|
| 1 | 0.000 | 0.050 | 0.080 | 0.200 | 0.079 | INT* | SNM* |
| 2 | 0.000 | 0.051 | 0.081 | 0.201 | 0.079 | INT* | SNM* |
| 3 | 0.000 | 0.051 | 0.081 | 0.202 | 0.079 | INT* | SNM* |
| 4 | 0.000 | 0.051 | 0.081 | 0.202 | 0.080 | INT* | SNM* |
| 5 | 0.000 | 0.051 | 0.081 | 0.202 | 0.079 | INT* | SNM* |
| 6 | 0.000 | 0.052 | 0.082 | 0.203 | 0.079 | INT* | SNM* |
| 7 | 0.000 | 0.051 | 0.081 | 0.203 | 0.080 | INT* | SNM* |
| 8 | 0.000 | 0.051 | 0.082 | 0.203 | 0.080 | INT* | SNM* |
| 9 | 0.000 | 0.051 | 0.082 | 0.202 | 0.080 | INT* | SNM* |
| 10 | 0.000 | 0.052 | 0.082 | 0.202 | 0.080 | INT* | SNM* |
| 11 | 0.000 | 0.051 | 0.082 | 0.203 | 0.080 | INT* | SNM* |
| 12 | 0.000 | 0.051 | 0.082 | 0.203 | 0.080 | INT* | SNM* |
| 13 | 0.000 | 0.052 | 0.081 | 0.203 | 0.080 | INT* | SNM* |
| 14 | 0.000 | 0.051 | 0.082 | 0.203 | 0.080 | INT* | SNM* |
| 15 | 0.000 | 0.051 | 0.082 | 0.203 | 0.081 | INT* | SNM* |
| 16 | 0.000 | 0.051 | 0.082 | 0.203 | 0.079 | INT* | SNM* |
| 17 | 0.000 | 0.051 | 0.082 | 0.202 | 0.080 | INT* | SNM* |
| 18 | 0.000 | 0.051 | 0.082 | 0.202 | 0.079 | INT* | SNM* |
| 19 | 0.000 | 0.051 | 0.082 | 0.203 | 0.080 | INT* | SNM* |
| 20 | 0.000 | 0.052 | 0.082 | 0.203 | 0.079 | INT* | SNM* |
| 21 | 0.000 | 0.052 | 0.081 | 0.202 | 0.079 | INT* | SNM* |
| 22 | 0.000 | 0.051 | 0.082 | 0.203 | 0.081 | INT* | SNM* |
| 23 | 0.000 | 0.051 | 0.081 | 0.203 | 0.080 | INT* | SNM* |
| 24 | 0.000 | 0.051 | 0.082 | 0.203 | 0.080 | INT* | SNM* |
| 25 | 0.000 | 0.051 | 0.082 | 0.203 | 0.080 | INT* | SNM* |
| **Mean** | | 0.051 | 0.082 | 0.202 | 0.080 | | |
| **Std Dev** | | 0.0005 | 0.0006 | 0.0008 | 0.0006 | | |
| **Minimum** | | 0.050 | 0.080 | 0.200 | 0.079 | | |
| **Maximum** | | 0.052 | 0.082 | 0.203 | 0.081 | | |

**Average Standard Deviation:** **0.0006**

# APPENDIX C-3
## Analytical Results
## Intoxilyzer 8000 S.N. 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 * = Interferent Detect | Mouth Alcohol Test * = Slope Not Met |
|---|---|---|---|---|---|---|---|
| 1 | 0.000 | 0.052 | 0.083 | 0.202 | 0.079 | INT* | SNM* |
| 2 | 0.000 | 0.051 | 0.082 | 0.200 | 0.080 | INT* | SNM* |
| 3 | 0.000 | 0.051 | 0.082 | 0.202 | 0.080 | INT* | SNM* |
| 4 | 0.000 | 0.051 | 0.082 | 0.201 | 0.080 | INT* | SNM* |
| 5 | 0.000 | 0.051 | 0.082 | 0.201 | 0.080 | INT* | SNM* |
| 6 | 0.000 | 0.051 | 0.082 | 0.200 | 0.080 | INT* | SNM* |
| 7 | 0.000 | 0.051 | 0.082 | 0.201 | 0.080 | INT* | SNM* |
| 8 | 0.000 | 0.052 | 0.082 | 0.201 | 0.080 | INT* | SNM* |
| 9 | 0.000 | 0.051 | 0.082 | 0.201 | 0.080 | INT* | SNM* |
| 10 | 0.000 | 0.051 | 0.082 | 0.201 | 0.081 | INT* | SNM* |
| 11 | 0.000 | 0.052 | 0.082 | 0.201 | 0.080 | INT* | SNM* |
| 12 | 0.000 | 0.052 | 0.082 | 0.201 | 0.080 | INT* | SNM* |
| 13 | 0.000 | 0.051 | 0.083 | 0.201 | 0.080 | INT* | SNM* |
| 14 | 0.000 | 0.051 | 0.082 | 0.201 | 0.080 | INT* | SNM* |
| 15 | 0.000 | 0.051 | 0.082 | 0.201 | 0.081 | INT* | SNM* |
| 16 | 0.000 | 0.051 | 0.082 | 0.203 | 0.080 | INT* | SNM* |
| 17 | 0.000 | 0.052 | 0.082 | 0.201 | 0.080 | INT* | SNM* |
| 18 | 0.000 | 0.051 | 0.081 | 0.201 | 0.080 | INT* | SNM* |
| 19 | 0.000 | 0.051 | 0.082 | 0.200 | 0.080 | INT* | SNM* |
| 20 | 0.000 | 0.051 | 0.082 | 0.201 | 0.080 | INT* | SNM* |
| 21 | 0.000 | 0.051 | 0.082 | 0.201 | 0.080 | INT* | SNM* |
| 22 | 0.000 | 0.051 | 0.082 | 0.201 | 0.081 | INT* | SNM* |
| 23 | 0.000 | 0.052 | 0.082 | 0.201 | 0.080 | INT* | SNM* |
| 24 | 0.000 | 0.052 | 0.081 | 0.200 | 0.080 | INT* | SNM* |
| 25 | 0.000 | 0.051 | 0.082 | 0.201 | 0.081 | INT* | SNM* |
| Mean | | 0.051 | 0.082 | 0.201 | 0.080 | | |
| Std Dev | | 0.0005 | 0.0004 | 0.0006 | 0.0004 | | |
| Minimum | | 0.051 | 0.081 | 0.200 | 0.079 | | |
| Maximum | | 0.052 | 0.083 | 0.203 | 0.081 | | |

**Average Standard Deviation:** **0.0005**