

# Forensic Oversight Board Meeting- 6/14/24

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# Letter to Chief Justices

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- On March 26, 2024 a letter was sent to the Chief Justices regarding the breath test machines not being programmed with Massachusetts OAT tolerance ranges.

March 26, 2024

Chief Justice Heidi Brieger  
Executive Office of the Trial Court  
1 Pemberton Sq.  
Boston, MA 02108

Chief Justice Stacey J. Fortes  
Administrative Office  
Edward W. Brooke Courthouse,  
24 New Chardon St., 1st Floor  
Boston, MA 02114

Re: Office of Alcohol Testing

Dear Chief Justice Brieger and Chief Justice Fortes,

A variety of concerning issues and problems with the Office of Alcohol Testing (OAT) have been discovered by Attorney Steven Panagiotis of Concord and Attorney Joe Bernard. Specifically, OAT certified breath test machines are not programmed with Massachusetts tolerance ranges, and are at times producing untruthful “pass” results. These issues deal directly with the maintenance and calibration of every Draeger Alcotest 9510 machine in Massachusetts. One of the most troubling factors was the degree of difficulty involved in identifying these problems. Most defense lawyers and prosecutors will be unable to identify this misleading information; it was only after countless hours of research that we were able to unearth these problems. The information is buried and the fact that the machines are not programmed consistent with Massachusetts standards is totally unfair and deceptive.

This troubling issue that has been discovered requires immediate remedial action. Based upon the nature of this issue, as further discussed below, we request that an immediate statewide moratorium be instituted on using breath test results to prosecute OUI offenses in the Commonwealth. During this moratorium, we request that an investigation into this issue be conducted and a hearing take place as to the full scope of the impact on the calibration and certification process.

As you are aware, the certification and calibration process was the main subject matter of the nine years of the statewide breath test litigation. The accuracy and manner in which the machine is calibrated are of vital importance to the scientific reliability of the results when it measures a citizen's breath sample in the field. Each year, the Draeger 9510 breath test machines are brought

# Timeline:

- **October 2023-** OAT reached out to Draeger for explanation
- **November 2023-** Sent FOIA Request
- **December 2023-** Draeger responded to OAT
- **December 2023-** Received FOIA Response
- **January 2024-** OAT emailed Joe Bernard Draeger Response
- **February 2024-** Joe Bernard emailed OAT back regarding question not being answered
- **March 2024-** Letter was sent to the Chief Justices
- **April 8th, 2024-** Meeting with BT Working Group- discussed having OAT mark the worksheets as 'Failed'
- **June 20th, 2024-** Have not heard an update regarding a remedy yet, but there will be a BT Working Group meeting on this date.

# Communication Between OAT & Draeger in 2018 Before Accreditation-Obtained via FOIA Request

## **OAT to Draeger-May 2018:**

“We’re working on rewriting our 9510 certification protocol to prepare for applying for accreditation and we’re trying to understand the reasoning behind some of our previously established acceptable tolerances. Are you available this week to discuss some of the technical aspects? I don’t know if you have any firsthand knowledge of the discussions between OAT and Draeger when they were establishing these ranges or if we should also reach out to Hansueli. Here are some of the questions that we have:

- 1) Currently our check of the 0.100% wet auto-adjustment is set at  $\pm 3\%$  but our 0.100% dry verification immediately after is set to  $\pm 1\%$  followed by a manual adjust if necessary. Is there a reason why the dry is much tighter? Should it be that tight? What possible ramifications could occur from widening the dry tolerance and/or making them the same?
- 2) Our 0.400% verification followed by manual adjustment if necessary is at  $\pm 2\%$  while the “calibration” steps afterward are all set to 4%. Is there a reason that the 0.400% is tighter?

## **Draeger to OAT:**

“Would Thursday May 24 at 11 am EDT work for you? If so, Hansueli and I are available then. I set up a conference line for this:  
Dial-in : +1 215 660 2600  
Conference ID: 89071673”

# Email Communication Between OAT & Draegar- 2023

OAT reached out to Draegar for more information in regards to what causes the machine to provide the 'Pass' or 'Fail' message.

## **OAT to Draegar on October 27, 2023:**

"I was hoping you might be able to answer a question for us. I have received a couple inquiries from attorneys here in Massachusetts about the "Certification Test Results" and "Verification Test Results" parameters on the Massachusetts 9510 for the tests that OAT runs during our certification of an instrument. I am trying to determine which parameters cause these fields to read "FAIL" on the printouts generated during each of the types of tests that OAT runs. OAT has its own internal ranges and limits that analysts evaluate the IR and EC readings against, but I am trying to find the parameters set in the instrument by Draeger that cause "Certification Test Results" and "Verification Test Results" to read "PASS" or "FAIL." Is this something you can provide us or is there any documentation that we could share that explains the parameters set in the instrument to determine the results of those fields?

For reference, the following are the tests performed by OAT during certification that we are looking for:

- 0.100 adjustment check (ethanol solution; calibration procedure)
- 0.100 verification test (dry gas; verification test)
- 0.400 verification test (ethanol solution; verification test)
- 0.200 calibration test (dry gas; verification test)
- 0.080 calibration test (dry gas; verification test)
- 0.020 calibration test (dry gas; verification test)
- 0.080 quality control test (ethanol solution; verification test)

Please let me know at your earliest convenience whether this is something you can assist us with or if there is someone else at Draeger that you can connect us with to get this information. Thanks for your time and assistance."



# Email Communication Between OAT & Draegar- 2023

## *Draegar to OAT on December 19, 2023:*

— “This information is based on your instrument configuration version 1.56. The MA instrument uses PERCENT BAC as the measurement unit.

### Measurement Procedure 8:

0.100 adjustment check (ethanol solution; calibration procedure) – [Adjustment Procedure menu item](#)  
The tolerances in this procedure are: 0.005 percent BAC absolute or 5% relative, whichever is greater.

### Measurement procedure 10:

- 0.100 verification test (dry gas; verification test) – [Verification Test menu item](#)
- 0.400 verification test (ethanol solution; verification test) – [Verification Test menu item](#)
- 0.200 calibration test (dry gas; verification test) – [Verification Test menu item](#)
- 0.080 calibration test (dry gas; verification test) – [Verification Test menu item](#)
- 0.020 calibration test (dry gas; verification test) – [Verification Test menu item](#)
- 0.080 quality control test (ethanol solution; verification test) – [Verification Test menu item](#)

The tolerances are 0.010 percent BAC absolute or 7% relative, whichever is greater. In measurement procedure 10 the operator can choose the target concentration, gas type and gas inlet, however the tolerances are fixed. Anticipating a potential additional question, the tolerance window is inclusive (PASS) at the exact tolerance limits.

Please let us know if you need additional information.”

# Communication Between Joe Bernard & OAT- Dies On The Vine

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Joe Bernard Email to OAT Regarding Draeger Response on February 2024:

"I have been reviewing all of your responses, and I so appreciate the work, but I don't think Brian Shaffer answers the question we need answered. You have informed me in previous emails and conversations that all standards have a different tolerance ranges than what the machine is programmed by Draeger during the certification process. What we want to know are the specific tolerance ranges set in the machine versus what OAT is utilizing. As you have said OAT's tolerance ranges are more narrow than the machine settings but could you specifically inform me of the tolerance ranges? Could you send me these two sets of tolerance ranges, so I could see them?

Sincerely,

Steve and Joe"

# OAT Monitoring Certification Process

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- OAT is monitoring both the tolerance ranges and limits.
- Possibility of Human Error-
  - The process set in place with OAT has a human monitoring the tolerance range and limits due to OAT's set ranges & limits being different from what is programmed in the machine.
  - Defense attorneys are trusting the machine to catch issues during our client's BT, but we cannot trust the machine to determine if a machine passes or fails certification at a specific ethanol concentration



# ISO 17025- Scientifically Not Precluded

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What is ISO 17025?

- ISO/IEC is the main standard used by testing and calibration laboratories. It is the standard for which most labs must hold accreditation in order to be deemed technically competent.



## Tolerance Ranges- Found in the Certificate of Calibration Procedure- Issued in September 2014

Ethanol Concentration	Acceptable Ranges	Acceptable Limits
0.100% wet	0.097% - 0.103%	+/- 0.003
0.100% dry	0.099%-0.101%	+/- 0.002
0.400% wet	0.392%-0.408%	+/- 0.005
0.200% dry	0.195%-0.205%	+/- 0.005
0.080% dry	0.075% - 0.085%	+/- 0.003
0.020% dry	0.017%-0.023%	+/- 0.003
0.080% wet	0.075% - 0.085%	+/- 0.003

## Tolerance Ranges- Found in the Certificate of Calibration Procedure- May 2016-2017

<b>Ethanol Concentration</b>	<b>Current Acceptable Ranges</b>	<b>Current Acceptable Limits</b>
0.100% wet	0.097% - 0.103%	+/- 0.003
0.100% dry	0.099% - 0.101%	+/- 0.002
0.400% wet	0.392% - 0.408%	+/- 0.005
0.200% dry	0.192% - 0.208%	+/- 0.005
0.080% dry	0.074% - 0.086%	+/- 0.003
0.020% dry	0.016% - 0.024%	+/- 0.003
0.080% wet	0.074% - 0.086%	+/- 0.003

# Most Updated Tolerance Ranges- Found in the Certificate of Calibration Procedure for the Alcotest 9510- October 2022

## 13 Appendix 1

Ethanol Concentration	Acceptable Ranges	Acceptable Limits
0.100% wet	0.097% - 0.103%	+/- 0.003
0.100% dry	0.097% - 0.103%	+/- 0.003
0.400% wet	0.388% - 0.412%	+/- 0.005
0.200% dry	0.190% - 0.210%	+/- 0.005
0.080% dry	0.075% - 0.085%	+/- 0.003
0.020% dry	0.015% - 0.025%	+/- 0.003
0.080% wet	0.075% - 0.085%	+/- 0.003

## 6.2 Adjustment Check using 0.100% Wet- Procedure

Adjustment Check using 0.100% Wet 6.2.1 When instrument screen prompts for the calibration check, remove simulators and attach 0.100% OAT manufactured solution tandem simulators. Connect the short silicone hose to the Cuvette Inlet (Diagram 1) and insert the adaptor connected to the clear hose to the Simulator Standard Pump Outlet Port (Diagram 1).

6.2.2 Initiate adjustment check process by pressing “OK”.

6.2.3 Review the Adjustment Check Test Results printout after it prints to determine if results are within the following acceptance criteria:

6.2.4 The IR and EC results must fall within the range of 0.097% - 0.103% alcohol content.

6.2.5 The IR and EC results (n=6) must agree within +/- 0.003 alcohol content of each other.

6.2.6 If the results fall within the acceptance criteria, remove simulators from the instrument and proceed to Verification Test and Manual Adjustment (section 6.3).

6.2.7 If the adjustment check results are outside the acceptance criteria, repeat the adjustment (section 6.1) and adjustment check (section 6.2) once. If the results still do not fall within acceptance criteria, consult with a supervisor to stop the certification procedure and document this on the BT Certification Form. The instrument shall be labeled as “Out of Service”. Certification may be attempted again at a later date. If the adjustment check results are still outside of the acceptance criteria, consult with a supervisor to determine if the instrument will be sent for repair.



# ARBE-0044- Sturbridge PD

## Massachusetts Office of Alcohol Testing Calibration Report

Sturbridge PD

Test Date: 04/02/2015

Sequential Test #: 409

Certification Test Results: **FAIL**

### Breath Test Instrument Information

Model Number Alcotest 9510 Serial Number ARBE-0044 Firmware Version 8322232 0.7.1

### Calibration Device / Standard Information

Model Number / Lot Number GUTH 2100 Serial Number / Concentration DR6310 Expiration Date 08/07/2015  
Cal Simulator: 8152 Cal Standard: 0.100 12/31/2016

### Calibration Check Device / Standard Information

Model Number / Lot Number GUTH 2100 Serial Number / Concentration DR6082 Expiration Date 08/08/2015  
Cal Check Simulator: 8151 Cal Check Standard: 0.100 07/13/2015

### Test Sequence Details

Function	Result %BAC	Time HH:MM:SS
Air Blank Test	0.000	08:13:51
Calibration Check IR	0.096	08:14:16
Calibration Check EC	0.096	08:14:16
Air Blank Test	0.000	08:15:51
Calibration Check IR	0.095	08:15:52
Calibration Check EC	0.094	08:15:52
Air Blank Test	0.000	08:17:27
Calibration Check IR	0.090	08:17:29
Calibration Check EC	0.095	08:17:29
Air Blank Test	0.000	08:18:18

Not within  
acceptable  
limit by OAT  
standards or  
the machine's  
standards

Analyst: DANIEL J. RENCZKOWSKI

Signature: DJR Signature Date: 04/02/2015

## Massachusetts Office of Alcohol Testing Calibration Report

Sturbridge PD

Test Date: 04/02/2015

Sequential Test #: 410

Certification Test Results: **PASS**

### Breath Test Instrument Information

Model Number Alcotest 9510 Serial Number ARBE-0044 Firmware Version 8322232 0.7.1

### Calibration Device / Standard Information

Model Number / Lot Number GUTH 2100 Serial Number / Concentration DR6310 Expiration Date 08/07/2015  
Cal Simulator: 8152 Cal Standard: 0.100 12/31/2016

### Calibration Check Device / Standard Information

Model Number / Lot Number GUTH 2100 Serial Number / Concentration DR6082 Expiration Date 08/08/2015  
Cal Check Simulator: 8151 Cal Check Standard: 0.100 07/13/2015

### Test Sequence Details

Function	Result %BAC	Time HH:MM:SS
Air Blank Test	0.000	08:25:36
Calibration Check IR	0.097	08:26:00
Calibration Check EC	0.095	08:26:00
Air Blank Test	0.000	08:27:35
Calibration Check IR	0.097	08:27:37
Calibration Check EC	0.095	08:27:37
Air Blank Test	0.000	08:29:11
Calibration Check IR	0.097	08:29:12
Calibration Check EC	0.095	08:29:12
Air Blank Test	0.000	08:30:00

Outside  
acceptable  
range of  
0.097-0.103  
%

Analyst: DANIEL J. RENCZKOWSKI

Signature: DJR Signature Date: 04/02/2015



# Failed Certification -Ethanol Concentration 0.100%

Station # 2

## Sturbridge PD

PBTs ☒ Lids ☒ Side Cover ☒ Keys ☒ Power ☒ KB ☒ Print ☒ Scanner ☒ Cat 5 ☒ Notes: \_\_\_\_\_

Model Number: Alcotest 9510      Serial Number: ARBE-0044      MSP ID#: 103094

☒ OAT IP ☒ Database Management ☒ Set Date and Time ☒ Check Internal Printer Paper ☒ Firmware Version Check

M16:0.7.1/8322232  
WinCE:4.9.23/8322233  
Image Ver: 1.6  
Cfg: 1.18/8322235

☒ Barometric Pressure

Initial BT Ambient Pressure: 1019 hPas      External Ambient Pressure: 1015.5 hPas  
Acceptable Range: 1013.0 - 1018.0      Final BT Ambient Pressure: 1015 hPas

☒ 0.100% Calibration Procedure (Wet)

Cal Lot# 8152 Exp. 12/31/2016      Guth 2100 S/N DR6310 Exp. 08/07/2015      Temp. 34.0 °C  
Cal Check 8151 Exp. 07/13/2015      Guth 2100 S/N DR6082 Exp. 08/08/2015      Temp. 34.0 °C

☒ Activate Cylinder 1

☒ 0.100% Verification Test (Dry)

Lot# DG0081 Exp. 06/10/2017

☒ 0.400% Verification Test (Wet)

Lot# 8133 Exp. 05/31/2015      Guth 2100 S/N DR6582 Exp. 08/08/2015      Temp. NA °C

☒ 0.200% Verification Test (Dry)

Lot# DG0065 Exp. 04/12/2016

☒ 0.080% Verification Tests (Dry)

Lot# DG0088 Exp. 10/15/2017

☒ Activate Cylinder 2

☒ 0.020% Verification Test (Dry)

Lot# DG0082 Exp. 06/25/2017

☒ 0.080% Verification Test (Wet)

Lot# 8150 Exp. 07/05/2015      Guth 2100 S/N DR6320 Exp. 08/11/2015      Temp. NA °C

☒ Replace Cuvette Cap

☒ Cylinder Check

Tested By: DSR Date: 4-2-15  
Reviewed By: SNE Date: 4/7/15

☒ Set BT Certification Date

☒ Department IP

☒ Review BT Cert Date and Verify IP

Notes: \_\_\_\_\_

Updated Lot# Info: 03/20/2015

Intake ☒ Label ☒ Return ☒ Notify PD ☒

-No notes for this specific test

# 7.1 Calibration using 0.200% Dry Gas- Procedure

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7.1.7.4 If the results do not fall within acceptance criteria, repeat the 0.200% calibration once more.

7.1.8 If the results still do not fall within acceptance criteria, consult with a supervisor and document on the BT Certification Form. **The instrument shall be labeled as “Out of Service”.** Certification may be attempted again at a later date. If the calibration results are still outside of the acceptance criteria, consult with a supervisor to determine if the instrument will be sent for repair.

Exculpatory?  
Ordered in Ananias

# Needle in a Haystack

## ARBF-0010- State Police Springfield B3

Massachusetts Office of Alcohol Testing  
Calibration Test Results  
SP Springfield B3

Test Date: 02/21/2023 Sequential Test #: 1948

Verification Test Results: PASS

### Breath Test Instrument Information

Model Number  
Alcotest 9510 Serial Number  
ARBF-0010 Firmware Version  
8322232 0.7.1

### Calibration Standard Information

Type  
DRY Lot Number  
DG0234 Concentration  
0.200 Expiration  
04/12/2024 Inlet  
DrygasInlet1

### Test Sequence Details

Function	Result %BAC	Time HH:MM:SS
Air Blank Test	0.000	09:39:10
Calibration Standard IR	0.205	09:39:47
Calibration Standard EC	0.203	09:39:47
Air Blank Test	0.000	09:41:32
Calibration Standard IR	0.205	09:41:46
Calibration Standard EC	0.202	09:41:46
Air Blank Test	0.000	09:43:32
Calibration Standard IR	0.206	09:43:45
Calibration Standard EC	0.200	09:43:45
Air Blank Test	0.000	09:44:23

Not within  
acceptable  
limit +/- 0.005

Massachusetts Office of Alcohol Testing

Calibration

Test Results

SP Springfield B3

Test Date: 02/21/2023 Sequential Test #: 1949

Verification Test Results: PASS

### Breath Test Instrument Information

Model Number  
Alcotest 9510 Serial Number  
ARBF-0010 Firmware Version  
8322232 0.7.1

### Calibration Standard Information

Type  
DRY Lot Number  
DG0234 Concentration  
0.200 Expiration  
04/12/2024 Inlet  
DrygasInlet1

### Test Sequence Details

Function	Result %BAC	Time HH:MM:SS
Air Blank Test	0.000	10:02:49
Calibration Standard IR	0.206	10:03:26
Calibration Standard EC	0.204	10:03:26
Air Blank Test	0.000	10:05:12
Calibration Standard IR	0.207	10:05:26
Calibration Standard EC	0.202	10:05:26
Air Blank Test	0.000	10:07:12
Calibration Standard IR	0.207	10:07:26
Calibration Standard EC	0.200	10:07:26
Air Blank Test	0.000	10:08:05

Not within  
acceptable  
limit +/- 0.005

Analyst: ELIZABETH A. POYANT

Signature: Elizabeth A. Poyant Signature Date: 02/21/2023

Analyst: ELIZABETH A. POYANT

Signature: Elizabeth A. Poyant Signature Date: 02/21/2023

# Failed Certification - Ethanol Concentration 0.200% Dry

SP SPRINGFIELD B3		Station # 2	
		Updated Lot # Info: 02/01/2023	
Start Date 02/21/2023	Model Number ALCOTEST 9510	Serial Number ARBF-0010	Laboratory Case Number 18-22380
<input checked="" type="checkbox"/> OAT Network Address EAP			
<input checked="" type="checkbox"/> Database Verification 1-4 1933 *1936 EAP			
<input checked="" type="checkbox"/> Database Management EAP			
90-24 90B PC Train Per-Test 0 0 0 0 0			
<input checked="" type="checkbox"/> Database Reconciliation EAP			
<input checked="" type="checkbox"/> Set Date and Time EAP			
<input checked="" type="checkbox"/> Check Internal Printer Paper EAP			
<input checked="" type="checkbox"/> Firmware Version Check EAP M16: 0.7.1/8322232 WinCE: 4.12/8322233 Cfg: 1.56/8322235			
<input checked="" type="checkbox"/> Barometric Pressure EAP			
1007 hPas 9949 hPas Initial BT Ambient Pressure External Ambient Pressure 9925-9973 994 hPas Acceptable Range Final BT Ambient Pressure			
<input checked="" type="checkbox"/> 0.100% Adjustment Procedure (Wet) EAP			
Adj Lot# 8284 Exp. 03/07/2024 Guth 2100 S/N DR6315 Exp. 04/25/2023 Temp 34.0 °C Guth 2100 S/N* DR7430 Exp. 04/25/2023 Adj Check Lot# 8299 Exp. 03/06/2023 Guth 2100 S/N DR7423 Exp. 04/25/2023 Temp 34.0 °C Guth 2100 S/N* DR6314 Exp. 04/25/2023			
<input checked="" type="checkbox"/> Activate Cylinder 1 EAP			
<input checked="" type="checkbox"/> 0.100% Verification Test (Dry) EAP Lot# DG0219 Exp. 05/04/2023			
Adjustment if needed: - Adjust EC Drygas Offset Initial → Final N/A - Adjust Drygas % for Calgas Inlet Initial → Final N/A - 0.100% Verification Test (Dry) Initial → Final N/A			
<input checked="" type="checkbox"/> 0.400% Verification Test (Wet) EAP Lot# 8267 Exp. 09/28/2023 Guth 2100 S/N DR6582 Exp. 04/25/2023 Temp 34.0 °C Guth 2100 S/N* DR6082 Exp. 04/25/2023			
Adjustment if needed: - Adjust EC Quadratic Correction Factor Initial → Final N/A - Adjust IR Slope Multiplier Initial → Final N/A - 0.400% Verification Test (Wet) Initial → Final N/A			
<input checked="" type="checkbox"/> 0.200% Calibration (Dry) EAP EAP Lot# DG0234 Exp. 04/12/2024			
<input checked="" type="checkbox"/> 0.080% Calibration (Dry) N/A Lot# DG0218 Exp. 05/01/2023			
<input checked="" type="checkbox"/> Activate Cylinder 2 N/A			
<input checked="" type="checkbox"/> 0.020% Calibration (Dry) N/A Lot# DG0235 Exp. 04/07/2024			
<input checked="" type="checkbox"/> 0.080% Quality Control Test (Wet) N/A Lot# 8298 Exp. 02/28/2023 Guth 2100 S/N DR7433 Exp. 05/23/2023 Guth 2100 S/N* DR7419 Exp. 04/25/2023			
<input checked="" type="checkbox"/> Replace Cuvette Cap N/A			
<input checked="" type="checkbox"/> Cylinder Check N/A			
<input checked="" type="checkbox"/> Ready for Review EAP			
<input checked="" type="checkbox"/> Initial Tech/Admin Review JAK			
<input checked="" type="checkbox"/> Set BT Certification Date N/A			
<input checked="" type="checkbox"/> Department Network Addresses N/A			
<input checked="" type="checkbox"/> Certification Label N/A			
<input checked="" type="checkbox"/> Complete LIMS Template EAP			
Tested by: EAP Date: 02/21/2023 Final Tech/Admin Review: JAK Date: 2/21/2023			
Notes: 0.200% Calibration test results not within acceptance criteria. Instrument will be sent to repair.			

Massachusetts State Police Crime Laboratory  
Call Form BT Certification Form  
Issued By: Section Supervisor  
Issue Date: 11/4/2022 10:46:00 AM

02-2915 Revision: 6  
1 of 1

“0.200% calibration test results not within acceptance criteria.”



## 7.2 Calibration using 0.080% Dry Gas- Procedure

7.2.1 Repeat the steps for the above 0.200% calibration using a 0.080% cylinder.

7.2.2 Review the Calibration Test Results printout after it prints to determine if the results are within the following acceptance criteria:

7.2.2.1 The IR and EC results must fall within the range of 0.075% - 0.085% alcohol content.

7.2.2.2 The IR and EC results (n=6) must agree within +/- 0.003 alcohol content of each other.

7.2.2.3 If the results fall within the acceptance criteria, proceed to 7.3.

7.2.2.4 If the results do not fall within acceptance criteria, repeat the 0.080% calibration (section 7.2) once more.

7.2.3 If the results still do not fall within acceptance criteria, consult with a supervisor and document on the BT Certification Form. The instrument shall be labeled as "Out of Service". Certification may be attempted again at a later date. If the calibration results are still outside of the acceptance criteria, consult with a supervisor to determine if the instrument will be sent for repair.



# ARBK-0016- Amherst PD

Massachusetts Office of Alcohol Testing  
**Verification Report** *GAA 8-30-2019*  
*Calibration Test Results*  
Amherst PD

Test Date: 08/30/2019 Sequential Test #: 1434

Verification Test Results: **PASS**

**Breath Test Instrument Information**

Model Number Serial Number Firmware Version  
Alcotest 9510 ARBK-0016 8322232 0.7.1

**Calibration Standard Information**

Type Lot Number Concentration Expiration Inlet  
DRY DG0169 0.080 10/10/2020 CAL GAS INLET

**Test Sequence Details**

Function	Result %BAC	Time HH:MM:SS
Air Blank Test	0.000	10:34:10
Calibration Standard IR	0.077	10:34:47
Calibration Standard EC	0.078	10:34:47
Air Blank Test	0.000	10:36:16
Calibration Standard IR	0.077	10:36:29
Calibration Standard EC	0.078	10:36:29
Air Blank Test	0.000	10:38:01
Calibration Standard IR	0.081	10:38:15
Calibration Standard EC	0.077	10:38:15
Air Blank Test	0.000	10:38:46

Not within  
acceptable limit  
+/- 0.003

Analyst: GUSTAVO A. AVILA

Signature: [Signature] Signature Date: 08/30/2019

Massachusetts Office of Alcohol Testing  
**Verification Report** *GAA 8-30-2019*  
*Calibration Test Results*  
Amherst PD

Test Date: 08/30/2019 Sequential Test #: 1435

Verification Test Results: **PASS**

**Breath Test Instrument Information**

Model Number Serial Number Firmware Version  
Alcotest 9510 ARBK-0016 8322232 0.7.1

**Calibration Standard Information**

Type Lot Number Concentration Expiration Inlet  
DRY DG0169 0.080 10/10/2020 CAL GAS INLET 1

**Test Sequence Details**

Function	Result %BAC	Time HH:MM:SS
Air Blank Test	0.000	10:41:55
Calibration Standard IR	0.078	10:42:32
Calibration Standard EC	0.079	10:42:32
Air Blank Test	0.000	10:44:04
Calibration Standard IR	0.078	10:44:18
Calibration Standard EC	0.078	10:44:18
Air Blank Test	0.000	10:45:53
Calibration Standard IR	0.074	10:46:07
Calibration Standard EC	0.078	10:46:07
Air Blank Test	0.000	10:46:38

Tolerance  
outside  
acceptable  
range of  
0.075- 0.085%

Analyst: GUSTAVO A. AVILA

Signature: [Signature] Signature Date: 08/30/2019



# Failed Certification -Ethanol Concentration 0.080% Dry

Station # 1

## Amherst PD

PBTs ☒ Lid ☒ Side Cover ☒ Keys ☒ Power ☒ KB ☒ Print ☒ Scanner ☒ Cat 5 ☒ Notes: 8/30/19

Start Date 8-30-2019 Model Number Alcotest 9510 Serial Number ARBK-0016 MSP ID# 102885

☒ OAT IP ☒ Database Management

90-24 90B PC Train Per-Test

☒ Set Date and Time ☒ Check Internal Printer Paper ☒ Firmware Version Check

M16: 0.7.1/8322232  
WinCE: 4.10.0/8322233  
Cig: 1.51/8322235

☒ Barometric Pressure

Initial BT Ambient Pressure 1001 hPa External Ambient Pressure 1006.1 hPa

Acceptable Range 1003.6 - 1006.6 Final BT Ambient Pressure 1006 hPa

(A) or (B)

☒ 0.100% Adjustment Procedure (Wet)

Adj Lot# 8214 Exp. 02/25/2021 Guth 2100 S/N DR6083 Exp. 02/01/2020 Temp. 34.0 °C

Adj Check Lot# 8219 Exp. 09/24/2019 Guth 2100 S/N DR6581 Exp. 02/01/2020 Temp. 34.0 °C

☒ Activate Cylinder 1

☒ 0.100% Verification Test (Dry)

Lot# DG0166 Exp. 10/18/2020

Adjustment if needed:

- Adjust EC Drygas Offset Initial Final N/A

- Adjust Drygas % for Calgas Inlet Initial Final N/A

- 0.100% Verification Test (Dry) Initial Final N/A

☒ 0.400% Verification Test (Wet)

Lot# 8213 Exp. 04/04/2020 Guth 2100 S/N DR6318 Exp. 02/04/2020 Temp. 34.0 °C

Adjustment if needed:

- Adjust EC Quadratic Correction Factor Initial Final N/A

- Adjust IR Slope Multiplier Initial Final N/A

- 0.400% Verification Test (Wet) Initial Final N/A

☒ 0.200% Calibration (Dry)

Lot# DG0165 Exp. 10/18/2020

☒ 0.080% Calibration (Dry)

Lot# DG0169 Exp. 10/10/2020

☒ Activate Cylinder 2

☒ 0.020% Calibration (Dry)

Lot# DG0164 Exp. 10/18/2020

☒ 0.080% Quality Control Test (Wet)

Lot# 8222 Exp. 11/29/2019 Guth 2100 S/N DR6312 Exp. 02/01/2020 Temp. N/A °C

☒ Replace Cuvette Cap

☒ Cylinder Check

Tested By: GAA Date: 8-30-2019

Tech/Admin Reviewer: DSR Date: 8-30-2019

☒ Set BT Certification Date

☒ Department IP and Label

☒ Review BT Cert Date, Label and Verify IP

Notes: 0.080% Calibration procedure did not fall within acceptable tolerance will verify at a later date.  
Okay DSR 8-30-2019

Updated Lot# Info: 08/30/2019

Massachusetts State Police Crime Laboratory  
OAT Form BT Certification Form

ID: 2915 Revision: 2

“0.080% calibration procedure did not fall within acceptable tolerances”



# Possible Solutions

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- **Open Source?**
  - Software with source code that anyone can inspect and modify.
- **Independent Labs & New Machines?**