

Alaska Scientific Crime Detection Laboratory

DataMaster Evaluation Form

Issued: 04/03/2018
Effective: 04/04/2018

Version: DMEF2018 R0
Status: Active

Instrument # 100422

Date: 04/03/20

Analyst: Dereen Watten

1. Reason for instrument evaluation

Detector overflow

2. Visual Inspection

- Clean
- Replace missing screws
- Cermetex Box is secure
- Ensure modem cable present
- Gas Valve upright or secured to wall
- All tubing and connections are secure

3. O-ring inspection and ensure 2 O-rings in replacement bag

4. Troubleshooting/Repair

Locking bar on the filter wheel Solenoid was previously epoxied in place but has come loose. Epoxied back in place on 06/16/20.

Adjusted lamp and cooler voltages on 08/03/20 Cooler voltage B saving between reboots but lamp voltage is not saving changes.

Replaced controller board. Detector voltage still drifting. Replaced detector. Detector voltage no longer drifting; however, the lamp voltage changes on restart.

Fails internal standard - needs calibration. Replaced source.

5. VOC (attached)

6. Internal Standard value $\leq 3.00\%$ Yes No

7. Verify software version

Return to Factory for Repair

Ready for Calibration

Ready for Certification

Proceed to Close Out

See 2nd page DMV 08/07/20

VERIFICATION OF CALIBRATION REPORT

of DataMaster dmt Breath Test Instrument

State of Alaska

Serial #: 100422

Scientific Crime Detection Laboratory - Statewide Breath Alcohol Program

Date: 06/16/2020

External Standard Test Values

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080
TARGET AT 29.66: 0.079
LOT #: AG826101
EXPIRATION: 09/18/2020
TANK PRESSURE: 329 psi

BLANK TEST	0.000	14:43
INTERNAL STANDARD	VERIFIED	14:43
Xq = 0.107 (0.74%)		
EXTERNAL STANDARD	0.079	14:43
X[1] = 0.0794 (0.0010) (-0.0003)		
BLANK TEST	0.000	14:44
EXTERNAL STANDARD	0.079	14:44
X[1] = 0.0788 (0.0000) (0.0000)		
BLANK TEST	0.000	14:45
EXTERNAL STANDARD	0.079	14:46
X[1] = 0.0793 (0.0013) (-0.0005)		
BLANK TEST	0.000	14:46
EXTERNAL STANDARD	0.079	14:47
X[1] = 0.0792 (0.0003) (0.0011)		
BLANK TEST	0.000	14:48
EXTERNAL STANDARD	0.079	14:48
X[1] = 0.0791 (0.0002) (-0.0004)		
BLANK TEST	0.000	14:49

Average = 0.0790
Std Dev = 0.0000

Diagnostic Check

VERSIONS

DMT: 3.02
PIC: 3.03
Modem: 2.6
Questions: 2.2

TEMPERATURES

Sample Chamber = 48.9°C	PASSED
(44.0°C - 52.0°C)	
Breath Tube = 46.4°C	PASSED
(38.0°C - 50.0°C)	

SETTINGS

Lamp Voltage = 1.72 V	PASSED
(1.09 V - 2.53 V)	
Cooler Voltage = 1.76 V	PASSED
(1.02 V - 2.38 V)	
Bias Voltage = 80 V	PASSED
(48 V - 112 V)	
Chopper Freq = 517 Hz	PASSED
(475 Hz - 575 Hz)	
Barometer = 29.7 in	

PUMP INFO

Flow Rate = 4.718 L/M	PASSED
(3.500 L/M - 6.500 L/M)	

DETECTOR INFO

PUMP ON	PASSED
(0.002 V <= 0.010 V)	
PUMP OFF	PASSED
(0.002 V <= 0.010 V)	

FILTER INFO

Filter 1	PASSED
Filter 2	PASSED
Filter 3	PASSED

INTERNAL STANDARD

Xq = 0.106	1.31%	(0.00% - 4.00%)	PASSED
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Alaska Scientific Crime Detection Laboratory

DataMaster Evaluation Form

Issued: 05/15/2020
Effective: 05/15/2020

Version: DMEF 2020 R0
Status: Active

Instrument # 100422

Start Date: 08/07/20 (continued)

Analysts: Derek Walton

Reason for instrument evaluation

Detector overflow

Visual Inspection

- | | |
|--|--|
| <input type="checkbox"/> Clean | <input type="checkbox"/> Replace missing screws |
| <input type="checkbox"/> Cermetex Box is secure | <input type="checkbox"/> Ensure modem cable present |
| <input type="checkbox"/> Gas Valve upright or secured to wall | <input type="checkbox"/> All tubing and connections are secure |
| <input type="checkbox"/> O-ring inspection and ensure 2 O-rings in replacement bag | |

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Troubleshooting/Repair

Adjusted lamp/cooler voltages and barometric pressure.
Detector voltage appears stable. Instrument needs calibration.

- | | |
|---|---|
| <input checked="" type="checkbox"/> VOC (attached) | |
| <input checked="" type="checkbox"/> Internal Standard value $\leq 3.00\%$ | <u>14.20% Does not meet requirements</u> |
| <input checked="" type="checkbox"/> Verify software version | |
| <input type="checkbox"/> Return to Factory for Repair | <input checked="" type="checkbox"/> Ready for Calibration |
| <input type="checkbox"/> Ready for Certification | <input type="checkbox"/> Proceed to Close Out |

End Date: 08/07/20

Technician Screen

DATAMASTER dmt: 100422

Date: 08/07/2020
Time: 10:30 AM

Temperatures (°C)
Sample Cell: 48.9°C
Breath Tube: 45.9°C

Current Barometer 29.3 in
Volume (Ltr) 0.00

Settings
Lamp: 1.83 V
Bias: 79 V
Cooler: 1.82 V
Chopper: 526 Hz

Voltages (V)
Flow: 1.06 V
Detector: -0.078 V

VERIFICATION OF CALIBRATION REPORT

of DataMaster dmt Breath Test Instrument

State of Alaska

Serial #: 100422

Scientific Crime Detection Laboratory - Statewide Breath Alcohol Program

Date: 08/07/2020

External Standard Test Values

Diagnostic Check

VERSIONS
DMT: 3.02 ✓
PIC: 3.03
Modem: 2.6
Questions: 2.2

TEMPERATURES

Sample Chamber = 49.0°C PASSED
(44.0°C - 52.0°C)
Breath Tube = 46.0°C PASSED
(38.0°C - 50.0°C)

SETTINGS

Lamp Voltage = 1.80 V PASSED
(1.09 V - 2.53 V)
Cooler Voltage = 1.80 V PASSED
(1.02 V - 2.38 V)
Bias Voltage = 79 V PASSED
(48 V - 112 V)
Chopper Freq = 525 Hz PASSED
(475 Hz - 575 Hz)
Barometer = 29.3 in

PUMP INFO

Flow Rate = 4.831 L/M PASSED
(3.500 L/M - 6.500 L/M)

DETECTOR INFO

PUMP ON PASSED
(0.003 V <= 0.010 V)
PUMP OFF PASSED
(0.002 V <= 0.010 V)

FILTER INFO

Filter 1 PASSED
Filter 2 PASSED
Filter 3 PASSED

INTERNAL STANDARD FAILED

Xq = 0.123 (14.20%) (0.00% - 4.00%)

Diagnostic Check Failed