

# Alaska Scientific Crime Detection Laboratory

## DataMaster Evaluation Form

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

Version: DMEF 2020 R0  
Status: Active

Instrument # 100687

Start Date: 02/23/21

Analysts: Derek Walton

### Reason for instrument evaluation

Returbished by manufacturer, repaired for gas flow errors and tank interference

### 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 |  |

See eval from  
12/17/20 JMW  
02/23/21

### Troubleshooting/Repair

Mirror blocks taped, controller board modification present, Source block is tight, filter wheel assembly feels appropriate.

Adjusted lamp and cooler voltages.

VOC showed filter 2 values around 0.0040. Recommend calibration.

- VOC (attached)
- Internal Standard value  $\leq 3.00\%$
- Verify software version

- Return to Factory for Repair
- Ready for Certification

- Ready for Calibration
- Proceed to Close Out

End Date: 02/23/21

# VERIFICATION OF CALIBRATION REPORT

of DataMaster dmt Breath Test Instrument

State of Alaska

Serial #: 100687

Scientific Crime Detection Laboratory - Statewide Breath Alcohol Program

Date: 02/23/2021

## External Standard Test Values

### EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080  
TARGET AT 29.94: 0.080  
LOT #: AG923401  
EXPIRATION: 08/22/2021  
TANK PRESSURE: 830 psi

BLANK TEST	0.000	11:35
INTERNAL STANDARD	✓ VERIFIED	11:35
Xq = 0.091 (1.76%)		
EXTERNAL STANDARD	0.082	11:36
X[1] = 0.0822 (-0.0041) (-0.0018)		
BLANK TEST	0.000	11:37
EXTERNAL STANDARD	0.082	11:37
X[1] = 0.0819 (-0.0040) (-0.0018)		
BLANK TEST	0.000	11:38
EXTERNAL STANDARD	0.082	11:38
X[1] = 0.0823 (-0.0041) (-0.0020)		
BLANK TEST	0.000	11:39
EXTERNAL STANDARD	0.082	11:39
X[1] = 0.0816 (-0.0042) (-0.0018)		
BLANK TEST	0.000	11:40
EXTERNAL STANDARD	0.082	11:40
X[1] = 0.0823 (-0.0040) (-0.0018)		
BLANK TEST	0.000	11:41

Average = 0.0820  
Std Dev = 0.0000

## Diagnostic Check

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

### TEMPERATURES

Sample Chamber = 48.9°C	PASSED
(44.0°C - 52.0°C)	
Breath Tube = 43.5°C	PASSED
(38.0°C - 50.0°C)	

### SETTINGS

Lamp Voltage = 1.59 V	PASSED
(0.98 V - 2.30 V)	
Cooler Voltage = 1.61 V	PASSED
(0.97 V - 2.25 V)	
Bias Voltage = 80 V	PASSED
(48 V - 112 V)	
Chopper Freq = 526 Hz	PASSED
(475 Hz - 575 Hz)	
Barometer = 29.9 in	

### PUMP INFO

Flow Rate = 5.002 L/M	PASSED
(3.500 L/M - 6.500 L/M)	

### DETECTOR INFO

PUMP ON	PASSED
(0.001 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 ✓	PASSED
Xq = 0.091 1.56% (0.00% - 4.00%)	