INTOXILYZER® 8000 CALIBRATION ADJUSTMENT

Intoxilyzer® 8000 Serial Number: 80-0026660 Location: TOXL

A. Flow Sensor Calibration and Verification Check (Level 3,M,C,F)
1. ☒ Replaced o-rings if damaged
2. Flow Meter Serial Number: 40655
3. Air Supplied to Intoxilyzer® 8000 at:
   a. ☒ 5 L/min ☒ 15 L/min ☒ 30 L/min
4. ☒ Flow Rate Calibration Printout Attached
   a. ☒ Correlation ≥ 0.99000
5. ☒ Flow Sensor Calibration Verification (Level 3,D,F)
   a. 10 L/min: 0.160 L/S X 60 Sec/min = 9.60 L/min
   b. 20 L/min: 0.332 L/S X 60 Sec/min = 19.92 L/min
   c. ☒ Flow Rates within ± 1 L/min of Expected Value

B. Gas Tank Sensor Check (Level 3,D,G)
1. Display: 1027 psi Regulator: 1000 psi
2. ☒ Display and Regulator within 50 psi
3. ☒ Completed tare of tank sensor if needed (Level 3,M,C,G)

C. Optical Bench Calibration and Verification Check (Level 3,M,C,O)
1. ☒ Autocalibration Printout Attached
   a. ☒ Max Power Res Value ≥ 10
   b. ☒ Auto Range Res Value ≥ 4
2. Simulator Solutions for Optical Bench Calibration Adjustment
   a. ☒ Set # Solutions to Run at 5

Soln.	g/210 L	Lot No.	Exp. Date	Simulator SN
1	0.000	NA – MilliQ H_2O	NA – MilliQ H_2O	MP3002
2	0.040	2017061B	6 Jun 19	MP3057
3	0.080	2017071E	25 Jul 19	MP3058
4	0.150	2017051D	24 May 19	MP3059
5	0.300	2018031H	22 Mar 20	MP3061

3. 0.100 AC Calibration Gas for H2O Adjustment
   a. Lot No. 13518100A3 Cyl No. 6 Exp. Date: 5 Aug 20
4. Atmospheric Pressure
   a. 962 mbar Displayed by Intoxilyzer® 8000
   b. 962 mbar Adjusted to using barometer
   c. 961 mbar on Auto Calibration Report printout
5. ☒ Screen displayed "Calibration Success"

6. ☒ Calibration Adjustment Printout Attached
   a. ☒ Solution 1 Avg % Abs ≤ 0.2500
   b. ☒ Solution 2-5 REL STD DEV ≤ 3.000
   c. ☒ Residual (g/210 L) Values for Solutions 1-5 ≤ 0.0020 for 3 µm and 9 µm channels
   d. ☒ Dry Gas H2O Adjustment Sum for 3 µm and 9 µm channels within ± 10

		Average BrW		H_2O Adjust	
3 µm	4276.6665	+ 96 1485	=	5237.6665 BrW	4761.6665
9 µm	4507.0000	+ 254	=	4761	

7. ☒ Optical Bench Calibration Verification (Level 1, S and C)
   a. Wet Calibration Check
      i. Low AC Known Value ≤ 0.03 AC: 0.020 AC
      Sim. SN: DR5188 Lot No.: 18020 Exp. Date: 9 Jan 20
      ii. High AC Known Value ≥ 0.25 AC: 0.250 AC
      Sim. SN: DR3374 Lot No.: 2018036 Exp. Date: 22 Mar 20
   b. Dry Calibration Check: Known Value 0.08 AC
      Lot No. 349170804A3 Cyl No. 28 Exp. Date: 5 Feb 20
      Test 1 0.079 AC Test 4 0.079 AC Test 7 0.079 AC
      BrW ~~AC~~
      Test 2 0.078 AC Test 5 0.078 AC Test 8 0.079 AC
      BrW ~~AC~~
      Test 3 0.079 AC Test 6 0.079 AC Test 9 0.079 AC
      Average 0.079 AC
   c. ☒ Wet Calibration Check and Dry Calibration Check AC results are within ± 0.005 or ± 5% (whichever is greater) of stated value.

D. Remarks/Maintenance: Changed o-ring on breath hose, and simulator return. Completed calibration adjustment to check steps for calibration adjustment SOP. Display intensity is decreasing and barcode scanner has failed. Due to extent of repairs, instrument will be disposed of.

☒ Instrument is acceptable to be used in the field.

Rebecca Yuengert-Timms
Breath Analyst Signature

5 Feb 19
Date

Reviewed by

2/5/2019
Date

Intoxilyzer Test Record and Checklist
NDOAG Crime Lab. Div., Bismarck, ND 58501

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-002666
Location = TOXL 8164.14.00 09/16
02/05/2019 10:28
Flow Rate Calibration********
1: Rate (Liters/min) = 5
SQRT(Diff)) = 6.082
2: Rate (Liters/min) = 15
SQRT(Diff)) = 11.223
3: Rate (Liters/min) = 30
SQRT(Diff)) = 22.133
Dependent Data Scale Factor = 100000 L/min
Independent Data Scale Factor = 256
Rounded Slope = 597
Rounded Intercept = -343366
Correlation = 0.99598

TOXL
Intoxilyzer - Alcohol Analyzer
Model 8000 SN 80-002666
02/05/2019 12:07:27

Auto Calibration
Max Power Res Value = 45
Auto Range Res Value = 29

TOXL
Intoxilyzer - Alcohol Analyzer
Model 8000 SN 80-002666
02/05/2019 12:07:27

Auto Calibration

Solution = 0.000 g/210L or 0.0000 mg/l, Samples = 4, Discarded = 1

Sample	<<<<< 3um >>>>> % Abs	<<<<< 3um >>>>> (% Abs Ref)	<<<<< 9um >>>>> % Abs	<<<<< 9um >>>>> (% Abs Ref)
Sample #1	0.1420	(-0.0170)	0.1240	(-0.0070)
Sample #2	0.0970	(0.0380)	0.1170	(0.0020)
Sample #3	0.0790	(0.0850)	0.1130	(0.0180)
Sample #4	0.1060	(0.0860)	0.1040	(0.0200)
Avg % Abs	0.0940	(0.0697)	0.1113	(0.0133)
STD DEV	0.0137	(0.0274)	0.0067	(0.0099)
REL STD DEV	14.625	(39.371)	5.981	(73.993)

Solution = 0.040 g/210L or 0.1905 mg/l, Samples = 4, Discarded = 1

Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)
Sample #1	0.7620	(0.0060)	1.4670	(0.0100)
Sample #2	0.8020	(0.0060)	1.4920	(0.0140)
Sample #3	0.7910	(0.0260)	1.4980	(0.0160)
Sample #4	0.7980	(0.0250)	1.5090	(0.0140)
Avg % Abs	0.7970	(0.0190)	1.4997	(0.0147)
STD DEV	0.0056	(0.0113)	0.0086	(0.0012)
REL STD DEV	0.699	(59.313)	0.575	(7.873)

Solution = 0.080 g/210L or 0.3810 mg/l, Samples = 4, Discarded = 1

Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)
Sample #1	1.4570	(0.0120)	2.8510	(0.0060)
Sample #2	1.5070	(0.0090)	2.8840	(0.0000)
Sample #3	1.4640	(0.0340)	2.8830	(0.0060)
Sample #4	1.5100	(0.0220)	2.8900	(0.0060)
Avg % Abs	1.4937	(0.0217)	2.8857	(0.0040)
STD DEV	0.0257	(0.0125)	0.0038	(0.0035)
REL STD DEV	1.723	(57.708)	0.131	(86.603)

Solution = 0.150 g/210L or 0.7143 mg/l, Samples = 4, Discarded = 1

Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)
Sample #1	2.6040	(0.0020)	5.0660	(-0.0010)
Sample #2	2.6460	(0.0070)	5.1240	(0.0050)
Sample #3	2.6810	(-0.0040)	5.1490	(-0.0010)
Sample #4	2.6660	(0.0080)	5.1590	(-0.0010)
Avg % Abs	2.6643	(0.0037)	5.1440	(0.0010)
STD DEV	0.0176	(0.0067)	0.0180	(0.0035)
REL STD DEV	0.659	(181.591)	0.350	(346.410)

Solution = 0.300 g/210L or 1.4286 mg/l, Samples = 4, Discarded = 1

Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)
Sample #1	5.0460	(-0.0140)	9.6820	(-0.0090)
Sample #2	5.0190	(0.0210)	9.6960	(0.0140)
Sample #3	5.0750	(0.0040)	9.7240	(0.0150)
Sample #4	5.0850	(0.0040)	9.7490	(0.0140)
Avg % Abs	5.0597	(0.0097)	9.7230	(0.0143)
STD DEV	0.0356	(0.0098)	0.0265	(0.0006)
REL STD DEV	0.703	(101.534)	0.273	(4.028)

TOXL
Intoxilyzer - Alcohol Analyzer
Model 8000 SN 80-002666
02/05/2019 12:07:27

Auto Calibration

	<<<<< 3um >>>>>	<<<<< 9um >>>>>
Zero Order Coef	-249.62	-147.94
First Order Coef	2661.62	1336.08
Second Order Coef	41.75	15.28

Act (g/210L)	Fit (g/210L)	Residual (g/210L)	Act (g/210L)	Fit (g/210L)	Residual (g/210L)
0.000	0.000	-0.0000	0.000	0.000	-0.0000
0.040	0.040	0.0001	0.040	0.040	0.0003
0.080	0.080	-0.0002	0.080	0.081	-0.0005
0.150	0.150	0.0001	0.150	0.150	0.0003
0.300	0.300	-0.0000	0.300	0.300	-0.0000

	<<<<< 3um >>>>>	<<<<< 9um >>>>>

Solution = 0.100 g/210L or 0.4762 mg/l, Samples = 4, Discarded = 1

Sample		
Sample #1	4295.00	4475.00
Sample #2	4206.00	4475.00
Sample #3	4353.00	4516.00
Sample #4	4271.00	4530.00
Avg	4276.6665	4507.0000
STD DEV	73.6637	28.5832
REL STD DEV	1.722	0.634
H2O adjust (mg/l*10k)	485	254

Atmospheric Pressure = 961

**********CALIBRATION SUCCESSFUL**********

Intoxilyzer Test Record and Checklist
NDOAG Crime Lab. Div., Bismarck, ND 58501

CMI, Inc. Intoxilyzer — Alcohol Analyzer
North Dakota Model 8000 — SN 80-002666
Location = TOXL — 8164.14.00 09/16
02/05/2019 — 12:52

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	12:53
02 Std. Sol.	0.021	12:54
03 Room Air	0.000	12:54
04 Std. Sol.	0.021	12:55
05 Room Air	0.000	12:56
06 Std. Sol.	0.021	12:56
07 Room Air	0.000	12:57

08 Sim Temp = 34.0°C

Simul Ser No = DR5188
Std Sol No = 18020
County = 08 — Oper No. = 888888

Roberta Grieger-Nimmo
Operator Signature
ROBERTA GRIEGER-NIMMO

Remarks: Wet Calibration Check
Low AC
0.020 AC

Form 106-I8000

Intoxilyzer Test Record and Checklist
NDOAG Crime Lab. Div., Bismarck, ND 58501

CMI, Inc. Intoxilyzer — Alcohol Analyzer
North Dakota Model 8000 — SN 80-002666
Location = TOXL — 8164.14.00 09/16
02/05/2019 — 12:58

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	12:59
02 Std. Sol.	0.250	13:00
03 Room Air	0.000	13:01
04 Std. Sol.	0.250	13:01
05 Room Air	0.000	13:02
06 Std. Sol.	0.251	13:03
07 Room Air	0.000	13:03

08 Sim Temp = 34.0°C

Simul Ser No = DR3374
Std Sol No = 201803G
County = 08 — Oper No. = 888888

Roberta Grieger-Nimmo
Operator Signature
ROBERTA GRIEGER-NIMMO

Remarks: Wet Calibration Check
High AC
0.250 AC

Form 106-I8000

Intoxilyzer Test Record and Checklist
NDOAG Crime Lab. Div., Bismarck, ND 58501

CMI, Inc. Intoxilyzer — Alcohol Analyzer
North Dakota Model 8000 — SN 80-002666
Location = TOXL — 8164.14.00 09/16
02/05/2019 — 13:05

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	13:06
02 Std. Gas	0.079	13:06
03 Room Air	0.000	13:06
04 Std. Gas	0.078	13:07
05 Room Air	0.000	13:07
06 Std. Gas	0.079	13:08
07 Room Air	0.000	13:08

Lot No = 34917080A3
Cyl No = 028
Exp Date = 02/05/2020
County = 08 — Oper No. = 888888

Roberta Grieger-Nimmo
Operator Signature
ROBERTA GRIEGER-NIMMO

Remarks: Dry Calibration Check
0.080AC

Form 106-I8000

Intoxilyzer Test Record and Checklist
NDOAG Crime Lab. Div., Bismarck, ND 58501

CMI, Inc. Intoxilyzer
North Dakota Model 8000
Location = TOXL
02/05/2019

Alcohol Analyzer
SN 80-002666
8164.14.00 09/16
13:08

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	13:09
02 Std. Gas	0.079	13:10
03 Room Air	0.000	13:10
04 Std. Gas	0.078	13:10
05 Room Air	0.000	13:11
06 Std. Gas	0.079	13:11
07 Room Air	0.000	13:12

Lot No = 34917080A3
Cyl No = 028
Exp Date = 02/05/2020
County = 08

Oper No. = 888888

Roberta Grieger-Nimmo
Operator Signature
ROBERTA GRIEGER-NIMMO

Remarks: Dry Calibration Check
0.080 AC

Form 106-I8000

Intoxilyzer Test Record and Checklist
NDOAG Crime Lab. Div., Bismarck, ND 58501

CMI, Inc. Intoxilyzer
North Dakota Model 8000
Location = TOXL
02/05/2019

Alcohol Analyzer
SN 80-002666
8164.14.00 09/16
13:12

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	13:13
02 Std. Gas	0.079	13:13
03 Room Air	0.000	13:14
04 Std. Gas	0.079	13:14
05 Room Air	0.000	13:15
06 Std. Gas	0.079	13:15
07 Room Air	0.000	13:16

Lot No = 34917080A3
Cyl No = 028
Exp Date = 02/05/2020
County = 08

Oper No. = 888888

Roberta Grieger-Nimmo
Operator Signature
ROBERTA GRIEGER-NIMMO

Remarks: Dry Calibration Check
0.080AC

Form 106-I8000