INTOXILYZER® 8000 CALIBRATION ADJUSTMENT

Intoxilyzer® 8000 Serial Number: 80-003059 Location: TOXL

A. Flow Sensor Calibration and Verification Check (Level 3,M,C,F)
1. [X] Replaced o-rings if damaged
2. Flow Meter Serial Number: 40655
3. Air Supplied to Intoxilyzer® 8000 at:
   a. [X] 5 L/min [X] 15 L/min [X] 30 L/min
4. [X] Flow Rate Calibration Printout Attached
   a. [X] Correlation ≥ 0.99000
5. [X] Flow Sensor Calibration Verification (Level 3,D,F)
   a. 10 L/min: 0.160 L/S X 60 Sec/min = 9.6 L/min
   b. 20 L/min: 0.328 L/S X 60 Sec/min = 19.7 L/min
   c. [X] Flow Rates within ± 1 L/min of Expected Value

B. Gas Tank Sensor Check (Level 3,D,G)
1. Display: 552 psi Regulator: 575 psi
2. [X] Display and Regulator within 50 psi
3. [X] 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. [X] Autocalibration Printout Attached
   a. [X] Max Power Res Value ≥ 10
   b. [X] Auto Range Res Value ≥ 4
2. Simulator Solutions for Optical Bench Calibration Adjustment
   a. [X] 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	MP3067
2	0.020	201712B	12 Dec 19	MP3069
3	0.080	201707E	25 Jul 19	MP3070
4	0.150	201705D	24 May 19	MP3071
5	0.300	201803H	22 Mar 20	MP3062

3. 0.100 AC Calibration Gas for H2O Adjustment
   a. Lot No. 32316100A1 Cyl No. 3 Exp. Date: 5 Jan 19
4. Atmospheric Pressure
   a. 954 mbar Displayed by Intoxilyzer® 8000
   b. 956 mbar Adjusted to using barometer
   c. 955 mbar on Auto Calibration Report printout
5. [X] Screen displayed "Calibration Success"

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

	Average		H_2O Adjust
3 µm	4236.0000	+ 525	= 4761.0000
9 µm	4440.3335	+ 321	= 4761.3335

7. [X] 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: DR7111 Lot No.: 17160 Exp. Date: 8 Jun 19
      ii. High AC Known Value ≥ 0.25 AC: 0.300 AC
      Sim. SN: DR3375 Lot No.: 17350 Exp. Date: 11 Oct 19
   b. Dry Calibration Check: Known Value 0.08 AC
      Lot No. 34917080A3 Cyl No. 28 Exp. Date: 5 Feb 20
      Test 1 0.080 AC Test 4 0.080 AC Test 7 0.081 AC
      RGN ~~AC~~
      Test 2 0.081 AC Test 5 0.080 AC Test 8 0.081 AC
      RGN ~~AC~~
      Test 3 0.081 AC Test 6 0.080 RGN AC Test 9 0.081 AC
      Average 0.081 AC
   c. [X] Wet Calibration Check and Dry Calibration Check AC results are within ± 0.005 or ± 5% (whichever is greater) of stated value.

D. Remarks/Maintenance: Completed flow sensor and optical bench calibration adjustment because 80-003059 was opened on 15 Nov 18 to replace RTC battery. See repair and maintenance form.

[X] Instrument is acceptable to be used in the field.

Roberta Gregg-Nimmo
Breath Analyst Signature

5 Dec 18
Date

Reviewed by

05 DEC 2018
Date

TOXL
Intoxilyzer - Alcohol Analyzer
Model 8000 SN 80-003059
12/04/2018 14:52:29

Auto Calibration

	<<<<< 3um >>>>>		<<<<< 9um >>>>>	
Solution = 0.000 g/210L or 0.0000 mg/l, Samples = 4, Discarded = 1				
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)
Sample #1	0.0960	(-0.0090)	0.0920	(-0.0030)
Sample #2	0.0740	(-0.0020)	0.1070	(-0.0130)
Sample #3	0.0450	(0.0170)	0.1000	(0.0010)
Sample #4	0.1060	(0.0030)	0.1130	(-0.0120)
Avg % Abs	0.0750	(0.0060)	0.1067	(-0.0080)
STD DEV	0.0305	(0.0098)	0.0065	(0.0078)
REL STD DEV	40.683	(164.148)	6.100	(97.628)
Solution = 0.020 g/210L or 0.0952 mg/l, Samples = 4, Discarded = 1				
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)
Sample #1	0.4320	(-0.0030)	0.7930	(-0.0160)
Sample #2	0.4460	(-0.0010)	0.8160	(-0.0120)
Sample #3	0.4520	(0.0010)	0.8110	(0.0000)
Sample #4	0.4410	(0.0200)	0.7940	(0.0000)
Avg % Abs	0.4463	(0.0067)	0.8070	(-0.0040)
STD DEV	0.0055	(0.0116)	0.0115	(0.0069)
REL STD DEV	1.234	(173.853)	1.429	(173.205)
Solution = 0.080 g/210L or 0.3810 mg/l, Samples = 4, Discarded = 1				
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)
Sample #1	1.4620	(-0.0160)	2.8110	(0.0020)
Sample #2	1.4470	(0.0220)	2.8280	(-0.0070)
Sample #3	1.4420	(0.0120)	2.8280	(0.0000)
Sample #4	1.4870	(0.0000)	2.8600	(-0.0160)
Avg % Abs	1.4587	(0.0113)	2.8387	(-0.0077)
STD DEV	0.0247	(0.0110)	0.0185	(0.0080)
REL STD DEV	1.691	(97.192)	0.651	(104.619)
Solution = 0.150 g/210L or 0.7143 mg/l, Samples = 4, Discarded = 1				
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)
Sample #1	2.5930	(-0.0140)	5.0600	(0.0010)
Sample #2	2.5830	(0.0140)	5.0710	(0.0140)
Sample #3	2.5990	(0.0120)	5.0560	(0.0210)
Sample #4	2.6010	(0.0070)	5.0880	(0.0180)
Avg % Abs	2.5943	(0.0110)	5.0717	(0.0177)
STD DEV	0.0099	(0.0036)	0.0160	(0.0035)
REL STD DEV	0.380	(32.778)	0.316	(19.879)
Solution = 0.300 g/210L or 1.4286 mg/l, Samples = 4, Discarded = 1				
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)
Sample #1	5.0060	(0.0010)	9.6110	(0.0060)
Sample #2	5.0340	(0.0000)	9.6530	(0.0020)
Sample #3	5.0240	(0.0180)	9.6780	(0.0080)
Sample #4	5.0770	(0.0040)	9.7000	(0.0150)
Avg % Abs	5.0450	(0.0073)	9.6770	(0.0083)
STD DEV	0.0282	(0.0095)	0.0235	(0.0065)
REL STD DEV	0.558	(128.886)	0.243	(78.077)

TOXL
Intoxilyzer - Alcohol Analyzer
Model 8000 SN 80-003059
12/04/2018 14:52:29

Auto Calibration

	<<<<< 3um >>>>>	<<<<< 9um >>>>>
Zero Order Coef	-253.30	-158.25
First Order Coef	2782.86	1371.35
Second Order Coef	19.92	12.57

3um Act (g/210L)	3um Fit (g/210L)	3um Residual (g/210L)	9um Act (g/210L)	9um Fit (g/210L)	9um Residual (g/210L)
0.000	-0.001	0.0009	0.000	-0.000	0.0002
0.020	0.021	-0.0008	0.020	0.020	-0.0001
0.080	0.081	-0.0008	0.080	0.081	-0.0006
0.150	0.149	0.0009	0.150	0.150	0.0005
0.300	0.300	-0.0002	0.300	0.300	-0.0001

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

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

Sample	3um	9um
Sample #1	4341.00	4458.00
Sample #2	4206.00	4437.00
Sample #3	4272.00	4443.00
Sample #4	4230.00	4441.00
Avg	4236.0000	4440.3335
STD DEV	33.4066	3.0551
REL STD DEV	0.789	0.069
H2O adjust (mg/l*10k)	525	321

Atmospheric Pressure = 955

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

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

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-003059
Location = TOXL 8164.14.00 09/16
11/28/2018 14:00
Flow Rate Calibration********
1: Rate (Liters/min) = 5
SQRT(Diff)) = 5.566
2: Rate (Liters/min) = 15
SQRT(Diff)) = 11.133
3: Rate (Liters/min) = 30
SQRT(Diff)) = 21.930
Dependent Data Scale Factor = 100000 L/min
Independent Data Scale Factor = 256
Rounded Slope = 589
Rounded Intercept = -276335
Correlation = 0.99772

TOXL
Intoxilyzer - Alcohol Analyzer
Model 8000 SN 80-003059
12/04/2018 14:52:29

Auto Calibration
Max Power Res Value = 20
Auto Range Res Value = 17

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

CMI, Inc. Intoxilyzer — Alcohol Analyzer
North Dakota Model 8000 — SN 80-003059
Location = TOXL — 8164.14.00 09/16
12/04/2018 — 15:42

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	15:42
02 Std. Sol.	0.018	15:43
03 Room Air	0.000	15:43
04 Std. Sol.	0.018	15:44
05 Room Air	0.000	15:45
06 Std. Sol.	0.019	15:45
07 Room Air	0.000	15:46

08 Sim Temp = 34.0°C

Simul Ser No = DR7111
Std Sol No = 17160
County = 08 — Oper No. = 888888

Roberta Grieger-Nimmo
Operator Signature
ROBERTA GRIEGER-NIMMO

Remarks: 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 80-003059
Location = TOXL — 8164.14.00 09/16
12/04/2018 — 15:53

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	15:53
02 Std. Sol.	0.297	15:54
03 Room Air	0.000	15:55
04 Std. Sol.	0.297	15:55
05 Room Air	0.000	15:56
06 Std. Sol.	0.298	15:57
07 Room Air	0.000	15:57

08 Sim Temp = 34.0°C

Simul Ser No = DR3375
Std Sol No = 17350
County = 08 — Oper No. = 888888

Roberta Grieger-Nimmo
Operator Signature
ROBERTA GRIEGER-NIMMO

Remarks: High AC
0.300 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 80-003059
Location = TOXL — 8164.14.00 09/16
12/05/2018 — 12:03

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	12:03
02 Std. Gas	0.080	12:04
03 Room Air	0.000	12:04
04 Std. Gas	0.081	12:04
05 Room Air	0.000	12:05
06 Std. Gas	0.081	12:05
07 Room Air	0.000	12:06

Lot No = 34917080A3
Cyl No = 28
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 — Alcohol Analyzer
North Dakota Model 8000 — SN 80-003059
Location = TOXL — 8164.14.00 09/16
12/05/2018 — 12:06

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	12:07
02 Std. Gas	0.080	12:07
03 Room Air	0.000	12:07
04 Std. Gas	0.080	12:08
05 Room Air	0.000	12:08
06 Std. Gas	0.081	12:09
07 Room Air	0.000	12:09

Lot No = 34917080A3
Cyl No = 28
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 — Alcohol Analyzer
North Dakota Model 8000 — SN 80-003059
Location = TOXL — 8164.14.00 09/16
12/05/2018 — 12:09

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	12:10
02 Std. Gas	0.081	12:10
03 Room Air	0.000	12:11
04 Std. Gas	0.081	12:11
05 Room Air	0.000	12:12
06 Std. Gas	0.081	12:12
07 Room Air	0.000	12:13

Lot No = 34917080A3
Cyl No = 28
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