

INTOXILYZER® 8000 CALIBRATION ADJUSTMENT

Intoxilyzer® 8000 Serial Number: 80-002669 Location: TOXL

- A. Flow Sensor Calibration and Verification Check (Level 3,M,C,F)
1. Replaced o-rings if damaged ^{ADJUST} ^{VERIFY}
 2. Flow Meter Serial Number: 40655 & 55260
 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. 167 L/S X 60 Sec/min = 10.02 L/min
 - b. 20 L/min: 0. 324 L/S X 60 Sec/min = 19.44 L/min
 - c. Flow Rates within ± 1 L/min of Expected Value
- B. Gas Tank Sensor Check (Level 3,D,G)
1. Display: 620 psi Regulator: 625 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 (ACTUAL)	NA - MilliQ H ₂ O	NA - MilliQ H ₂ O	DR7111
2	0.040 (0.040)	201808D	8.22.20	DR7347
3	0.080 (0.081)	201807C	7.25.20	DR5114 DR5114
4	0.150 (0.151)	201811E	11.25.20	DR5131
5	0.300 (0.298)	19010	1.3.21	DR7346

3. 0.100 AC Calibration Gas for H₂O Adjustment
 - a. Lot No. 13518100A3 Cyl No. 6 Exp. Date: 8.5.20
4. Atmospheric Pressure
 - a. 944 mbar Displayed by Intoxilyzer® 8000
 - b. 950 mbar Adjusted to using barometer
 - c. 949 mbar on Auto Calibration Report printout
5. Screen displayed "Calibration Success"

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

	Average		H ₂ O Adjust	
3 μ m	<u>4069</u>	+	<u>692</u>	= <u>4761</u>
9 μ m	<u>4354</u>	+	<u>407</u>	= <u>4761</u>

7. Optical Bench Calibration Verification (Level 1, S and C)
- a. Wet Calibration Check
 - i. Low AC Known Value \leq 0.03 AC: 0.020 AC
Sim. SN: MP3061 Lot No.: 201810D Exp. Date: 10.24.20
 - ii. High AC Known Value \geq 0.25 AC: 0.250 AC
Sim. SN: MP3067 Lot No.: 20911B Exp. Date: 11.5.21
 - b. Dry Calibration Check: Known Value 0.08 AC
Lot No. 24119080A1 Cyl No. 9 Exp. Date: 11/5/21
Test 1 0.083 AC Test 4 0.083 AC Test 7 0.083 AC
Test 2 0.082 AC Test 5 0.082 AC Test 8 0.082 AC
Test 3 0.083 AC Test 6 0.082 AC Test 9 0.083 AC
Average 0.083 AC
 - c. Wet Calibration Check and Dry Calibration Check AC results are within \pm 0.005 or \pm 5% (whichever is greater) of stated value.

D. Remarks/Maintenance: CAL ADJ. DUE TO LOW AC STD OF 0.015AC
RETURNING VALUES OF 0.011 & 0.012 AC. STILL WITHIN
TOLERANCE BUT LOW

Instrument is acceptable to be used in the field.

Charles E. Edr
Breath Analyst Signature

NA

4.21.20
Date

NA

Reviewed by

Date

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

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-002669
Location = TOXL 8164.14.00 09/16
04/20/2020 15:45

Flow Rate Calibration*****

1: Rate (Liters/min) = 5
 SQRT(Diff) = 6.926
2: Rate (Liters/min) = 15
 SQRT(Diff) = 12.000
3: Rate (Liters/min) = 30
 SQRT(Diff) = 21.609

Dependent Data Scale Factor = 100000 L/min

Independent Data Scale Factor = 256

Rounded Slope = 658

Rounded Intercept = -608824

Correlation = 0.99811



TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-002669
 04/21/2020 09:49:50

Auto Calibration

pg 1 of 2

	<<<<< 3um >>>>>		<<<<< 9um >>>>>	
	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)

Solution = 0.000 g/210L or 0.0000 mg/l, Samples = 4, Discarded = 1				
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)
Sample #1	0.1640	(-0.0070)	0.1950	(0.0040)
Sample #2	0.1220	(0.0790)	0.1290	(0.0730)
Sample #3	0.1130	(0.1460)	0.1490	(0.0850)
Sample #4	0.1260	(0.1660)	0.1340	(0.1020)
Avg % Abs	0.1203	(0.1303)	0.1373	(0.0867)
STD DEV	0.0067	(0.0456)	0.0104	(0.0146)
REL STD DEV	5.533	(34.962)	7.579	(16.813)

Solution = 0.040 g/210L or 0.1905 mg/l, Samples = 4, Discarded = 1				
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)
Sample #1	0.7840	(0.0110)	1.4920	(0.0090)
Sample #2	0.7910	(0.0430)	1.4920	(0.0230)
Sample #3	0.8020	(0.0560)	1.4720	(0.0480)
Sample #4	0.8170	(0.0570)	1.4810	(0.0420)
Avg % Abs	0.8033	(0.0520)	1.4817	(0.0377)
STD DEV	0.0131	(0.0078)	0.0100	(0.0131)
REL STD DEV	1.625	(15.020)	0.676	(34.649)

Solution = 0.081 g/210L or 0.3857 mg/l, Samples = 4, Discarded = 1				
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)
Sample #1	1.4580	(0.0000)	2.8050	(0.0080)
Sample #2	1.4690	(0.0360)	2.7920	(0.0440)
Sample #3	1.4980	(0.0310)	2.8280	(0.0340)
Sample #4	1.5060	(0.0490)	2.8330	(0.0340)
Avg % Abs	1.4910	(0.0387)	2.8177	(0.0373)
STD DEV	0.0195	(0.0093)	0.0224	(0.0058)
REL STD DEV	1.306	(24.030)	0.794	(15.465)

Solution = 0.151 g/210L or 0.7190 mg/l, Samples = 4, Discarded = 1				
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)
Sample #1	2.6640	(-0.0290)	5.0990	(-0.0180)
Sample #2	2.6430	(0.0000)	5.0660	(0.0230)
Sample #3	2.6270	(0.0160)	5.0490	(0.0400)
Sample #4	2.6590	(0.0310)	5.0620	(0.0500)
Avg % Abs	2.6430	(0.0157)	5.0590	(0.0377)
STD DEV	0.0160	(0.0155)	0.0089	(0.0137)
REL STD DEV	0.605	(98.953)	0.176	(36.240)

Solution = 0.298 g/210L or 1.4190 mg/l, Samples = 4, Discarded = 1				
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)
Sample #1	5.1190	(0.0020)	9.6980	(0.0010)
Sample #2	5.1370	(0.0240)	9.6960	(0.0450)
Sample #3	5.1030	(0.0550)	9.6770	(0.0770)
Sample #4	5.1640	(0.0360)	9.7310	(0.0570)
Avg % Abs	5.1347	(0.0383)	9.7013	(0.0597)
STD DEV	0.0306	(0.0156)	0.0274	(0.0162)
REL STD DEV	0.595	(40.777)	0.282	(27.094)

TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-002669
 04/21/2020 09:49:50

Auto Calibration

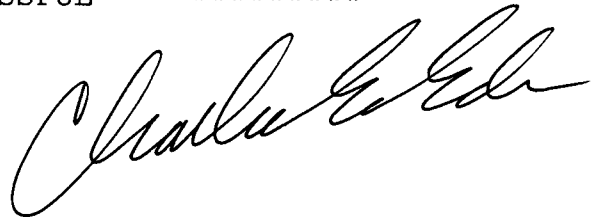
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Zero Order Coef	-367.00			-211.43	
First Order Coef	2858.51			1432.36	
Second Order Coef	-4.33			5.41	
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Act	Fit	Residual	Act	Fit	Residual
(g/210L)	(g/210L)	(g/210L)	(g/210L)	(g/210L)	(g/210L)
0.000	-0.000	0.0005	0.000	-0.000	0.0003
0.040	0.040	-0.0005	0.040	0.040	-0.0004
0.081	0.082	-0.0006	0.081	0.081	-0.0002
0.151	0.150	0.0007	0.151	0.151	0.0004
0.298	0.298	-0.0001	0.298	0.298	-0.0001
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<<<<< 3um >>>>>		<<<<< 9um >>>>>	
-----		-----	
Solution = 0.100 g/210L or 0.4762 mg/l, Samples = 4, Discarded = 1			
Sample			
Sample #1	4161.00	4335.00	
Sample #2	4036.00	4343.00	
Sample #3	4128.00	4368.00	
Sample #4	4043.00	4351.00	
Avg	4069.0000	4354.0000	
STD DEV	51.2152	12.7671	
REL STD DEV	1.259	0.293	
H2O adjust (mg/l*10k)	692	407	

Atmospheric Pressure = 949

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



TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-002669
 04/21/2020 09:49:50

Auto Calibration
 Max Power Res Value = 37
 Auto Range Res Value = 26

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

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-002669
Location = TOXL 8164.14.00 09/16
04/21/2020 10:38

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	10:38
02 Std. Sol.	0.019	10:39
03 Room Air	0.000	10:39
04 Std. Sol.	0.019	10:40
05 Room Air	0.000	10:41
06 Std. Sol.	0.020	10:41
07 Room Air	0.000	10:42

08 Sim Temp = 34.0°C

Simul Ser No = MP3061

Std Sol No = 201810D

County = 08

Oper No. = 666666



Operator Signature

CHARLES EDER

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 80-002669
Location = TOXL 8164.14.00 09/16
04/21/2020 10:43

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	10:44
02 Std. Sol.	0.254	10:45
03 Room Air	0.000	10:45
04 Std. Sol.	0.252	10:46
05 Room Air	0.000	10:47
06 Std. Sol.	0.252	10:47
07 Room Air	0.000	10:48

08 Sim Temp = 34.0°C

Simul Ser No = MP3067

Std Sol No = 201911B

County = 08

Oper No. = 666666



Operator Signature

CHARLES EDER

Remarks:

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 80-002669
Location = TOXL 8164.14.00 09/16
04/21/2020 10:52

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	10:53
02 Std. Gas	0.083	10:53
03 Room Air	0.000	10:54
04 Std. Gas	0.082	10:54
05 Room Air	0.000	10:55
06 Std. Gas	0.083	10:55
07 Room Air	0.000	10:56

Lot No = 24119080A1
Cyl No = 9
Exp Date = 11/05/2021
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks:

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 80-002669
Location = TOXL 8164.14.00 09/16
04/21/2020 10:56

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	10:56
02 Std. Gas	0.083	10:57
03 Room Air	0.000	10:57
04 Std. Gas	0.082	10:58
05 Room Air	0.000	10:58
06 Std. Gas	0.082	10:58
07 Room Air	0.000	10:59

Lot No = 24119080A1
Cyl No = 9
Exp Date = 11/05/2021
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks: 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 80-002669
Location = TOXL 8164.14.00 09/16
04/21/2020 10:59

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	11:00
02 Std. Gas	0.083	11:00
03 Room Air	0.000	11:01
04 Std. Gas	0.082	11:01
05 Room Air	0.000	11:02
06 Std. Gas	0.083	11:02
07 Room Air	0.000	11:03

Lot No = 24119080A1
Cyl No = 9
Exp Date = 11/05/2021
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks:

CALIBRATION CHECK
0.080 AC

Form 106-I8000