

INTOXILYZER® 8000 CALIBRATION ADJUSTMENT

Intoxilyzer® 8000 Serial Number: 80-005946 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 & 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. 164 L/S X 60 Sec/min = 9.84 L/min
 - b. 20 L/min: 0. 320 L/S X 60 Sec/min = 19.2 L/min
 - c. Flow Rates within ± 1 L/min of Expected Value

- B. Gas Tank Sensor Check (Level 3,D,G)
1. Display: 822 psi Regulator: 850 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	ACTUAL 0.000 (STD)	NA - MilliQ H ₂ O	NA - MilliQ H ₂ O	MP3068
2	0.040 (0.040)	17410	12.06.19	MP5317
3	0.080 (0.080)	18160	5.16.20	MP ^{S.CEE} 3318
4	0.151 (0.150)	201811E	11.26.20	MP5320
5	0.301 (0.300)	201803H	3.22.20	MP3070

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

	Average		H ₂ O Adjust	=	
3 μm	<u>4014</u>	+	<u>747</u>	=	<u>4761</u>
9 μm	<u>3894</u>	+	<u>867</u>	=	<u>4761</u>

7. Optical Bench Calibration Verification (Level 1, S and C)
- Wet Calibration Check
 - Low AC Known Value ≤ 0.03 AC: 0.010 AC
 Sim. SN: MP5289 Lot No.: 201805B Exp. Date: 5.30.20
 - High AC Known Value ≥ 0.25 AC: 0.250 AC
 Sim. SN: MP5321 Lot No.: 201803G Exp. Date: 3.22.20
 - Dry Calibration Check: Known Value 0.08 AC
 Lot No. 34418080A2 Cyl No. 12 Exp. Date: 2.5.21
 Test 1 0.082 AC Test 4 0.080 AC Test 7 0.081 AC
 Test 2 0.081 AC Test 5 0.082 AC Test 8 0.081 AC
 Test 3 0.081 AC Test 6 0.081 AC Test 9 0.081 AC
 Average 0.081 AC
 - Wet Calibration Check and Dry Calibration Check AC results are within ± 0.005 or $\pm 5\%$ (whichever is greater) of stated value.

D. Remarks/Maintenance: CALIBRATION ADJUSTMENT DUE TO KNOWN 0.080 AC STANDARD HAVING VALUES OF 0.075 to 0.077 RETURNED.

Instrument is acceptable to be used in the field.

Charles E. Eder
 Breath Analyst Signature

8/30/19
 Date

NA
 Reviewed by

NA
 Date

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

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-005946
Location = TOXL 8164.14.00 09/16
08/30/2019 14:25

Flow Rate Calibration*****

- 1: Rate (Liters/min) = 5
 SQRT(Diff) = 7.070
- 2: Rate (Liters/min) = 15
 SQRT(Diff) = 11.957
- 3: Rate (Liters/min) = 30
 SQRT(Diff) = 22.781

Dependent Data Scale Factor = 100000 L/min

Independent Data Scale Factor = 256

Rounded Slope = 608

Rounded Intercept = -503482

Correlation = 0.99502



TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-005946
 08/30/2019 14:36:39

Auto Calibration

pg 1 of 2

<<<<< 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	0.1010	(-0.0220)	0.2100	(0.0000)	
Sample #2	0.0750	(0.0360)	0.1860	(0.0320)	
Sample #3	0.0910	(0.0360)	0.2310	(0.0190)	
Sample #4	0.0640	(0.0470)	0.1760	(0.0270)	
Avg % Abs	0.0767	(0.0397)	0.1977	(0.0260)	
STD DEV	0.0136	(0.0064)	0.0293	(0.0066)	
REL STD DEV	17.709	(16.011)	14.822	(25.221)	

Solution = 0.040 g/210L or 0.1905 mg/l, Samples = 4, Discarded = 1					
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)	
Sample #1	0.7090	(0.0060)	1.6670	(-0.0030)	
Sample #2	0.7590	(-0.0280)	1.6940	(-0.0280)	
Sample #3	0.7670	(-0.0340)	1.6940	(-0.0330)	
Sample #4	0.7580	(-0.0350)	1.6660	(-0.0180)	
Avg % Abs	0.7613	(-0.0323)	1.6847	(-0.0263)	
STD DEV	0.0049	(0.0038)	0.0162	(0.0076)	
REL STD DEV	0.648	(11.709)	0.960	(29.004)	

Solution = 0.080 g/210L or 0.3810 mg/l, Samples = 4, Discarded = 1					
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)	
Sample #1	1.4320	(-0.0170)	2.9890	(0.0040)	
Sample #2	1.4560	(0.0060)	3.0450	(-0.0050)	
Sample #3	1.4350	(0.0190)	3.0050	(0.0190)	
Sample #4	1.4180	(0.0440)	3.0160	(0.0310)	
Avg % Abs	1.4363	(0.0230)	3.0220	(0.0150)	
STD DEV	0.0190	(0.0193)	0.0207	(0.0183)	
REL STD DEV	1.325	(83.970)	0.684	(122.202)	

Solution = 0.151 g/210L or 0.7190 mg/l, Samples = 4, Discarded = 1					
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)	
Sample #1	2.5710	(0.0050)	5.3280	(-0.0060)	
Sample #2	2.5500	(0.0340)	5.3160	(0.0080)	
Sample #3	2.5920	(0.0240)	5.3040	(0.0200)	
Sample #4	2.5560	(0.0360)	5.2910	(0.0180)	
Avg % Abs	2.5660	(0.0313)	5.3037	(0.0153)	
STD DEV	0.0227	(0.0064)	0.0125	(0.0064)	
REL STD DEV	0.885	(20.518)	0.236	(41.929)	

Solution = 0.301 g/210L or 1.4333 mg/l, Samples = 4, Discarded = 1					
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)	
Sample #1	4.8190	(-0.0060)	9.5330	(-0.0060)	
Sample #2	4.8340	(0.0110)	9.6250	(-0.0090)	
Sample #3	4.8860	(0.0120)	9.6690	(-0.0170)	
Sample #4	4.8920	(0.0090)	9.6650	(0.0030)	
Avg % Abs	4.8707	(0.0107)	9.6530	(-0.0077)	
STD DEV	0.0319	(0.0015)	0.0243	(0.0101)	
REL STD DEV	0.655	(14.321)	0.252	(131.301)	

TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-005946
 08/30/2019 14:36:39

Auto Calibration

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

Zero Order Coef	-221.27	
First Order Coef	2757.41	
Second Order Coef	47.55	

Act	Fit	Residual
(g/210L)	(g/210L)	(g/210L)
0.000	-0.000	0.0002
0.040	0.040	-0.0000
0.080	0.081	-0.0006
0.151	0.151	0.0005
0.301	0.301	-0.0001

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

Zero Order Coef	-271.95	
First Order Coef	1272.12	
Second Order Coef	24.99	

Act	Fit	Residual
(g/210L)	(g/210L)	(g/210L)
0.000	-0.000	0.0004
0.040	0.041	-0.0008
0.080	0.080	0.0002
0.151	0.151	0.0003
0.301	0.301	-0.0001

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

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

Sample	3um	9um
Sample #1	4143.00	4018.00
Sample #2	4009.00	3913.00
Sample #3	3994.00	3860.00
Sample #4	4039.00	3910.00
Avg	4014.0000	3894.3333
STD DEV	22.9129	29.7714
REL STD DEV	0.571	0.764
H2O adjust (mg/l*10k)	747	867

Atmospheric Pressure = 961

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




TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-005946
 08/30/2019 14:36:39

Auto Calibration
 Max Power Res Value = 18
 Auto Range Res Value = 5



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

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-005946
Location = TOXL 8164.14.00 09/16
08/30/2019 15:30

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	15:31
02 Std. Sol.	0.011	15:31
03 Room Air	0.000	15:32
04 Std. Sol.	0.011	15:33
05 Room Air	0.000	15:33
06 Std. Sol.	0.010	15:34
07 Room Air	0.000	15:34

08 Sim Temp = 34.0°C

Simul Ser No = MP5289
Std Sol No = 201805B
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks:

Low AC
0.010 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 80-005946
Location = TOXL 8164.14.00 09/16
08/30/2019 15:42

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	15:42
02 Std. Sol.	0.253	15:43
03 Room Air	0.000	15:44
04 Std. Sol.	0.253	15:44
05 Room Air	0.000	15:45
06 Std. Sol.	0.251	15:46
07 Room Air	0.000	15:46

08 Sim Temp = 34.0°C

Simul Ser No = MP5321
Std Sol No = 201803G
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 80-005946
Location = TOXL 8164.14.00 09/16
08/30/2019 15:48

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	15:49
02 Std. Gas	0.082	15:49
03 Room Air	0.000	15:50
04 Std. Gas	0.081	15:50
05 Room Air	0.000	15:50
06 Std. Gas	0.081	15:51
07 Room Air	0.000	15:51

Lot No = 34418080A2
Cyl No = 12
Exp Date = 02/05/2021
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks: CALIBRATION CHECK
0.080AC

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 80-005946
Location = TOXL 8164.14.00 09/16
08/30/2019 15:52

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	15:53
02 Std. Gas	0.080	15:53
03 Room Air	0.000	15:54
04 Std. Gas	0.082	15:54
05 Room Air	0.000	15:55
06 Std. Gas	0.081	15:55
07 Room Air	0.000	15:56

Lot No = 34418080A2
Cyl No = 12
Exp Date = 02/05/2021
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 80-005946
Location = TOXL 8164.14.00 09/16
08/30/2019 15:57

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	15:58
02 Std. Gas	0.081	15:58
03 Room Air	0.000	15:59
04 Std. Gas	0.081	15:59
05 Room Air	0.000	16:00
06 Std. Gas	0.081	16:00
07 Room Air	0.000	16:00

Lot No = 34418080A2
Cyl No = 12
Exp Date = 02/05/2021
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks: CALIBRATION CHECK
0.080 AC

Form 106-I8000