

INTOXILYZER® 8000 CALIBRATION ADJUSTMENT

Intoxilyzer® 8000 Serial Number: 80-003057 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: 55260 & 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: $0.000 \text{ L/S} \times 60 \text{ Sec/min} = \underline{0.000} \text{ L/min}$
 - b. 20 L/min: $0.320 \text{ L/S} \times 60 \text{ Sec/min} = \underline{19.20} \text{ L/min}$
 - c. ** Flow Rates within $\pm 1 \text{ L/min}$ of Expected Value NO

- B. Gas Tank Sensor Check (Level 3,D,G)
1. Display: 989 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 (ACTUAL)	NA - MilliQ H ₂ O	NA - MilliQ H ₂ O	MP3057
2	0.040 (0.041)	202003A	3.10.22	MP3059
3	0.080 (0.080)	21050	2.15.23	MP5318
4	0.100 (0.102)	202010E	10.20.22	MP3003
5	0.300 (0.298)	20030	1.21.22	MP3069

3. 0.100 AC Calibration Gas for H₂O Adjustment
 - a. Lot No. 07220100A1 Cyl No. 4 Exp. Date: 5/5/22
4. Atmospheric Pressure
 - a. 960 mbar Displayed by Intoxilyzer® 8000
 - b. 961 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		H ₂ O Adjust	
3 μm	<u>4410</u>	+	<u>351</u>	= <u>4761</u>
9 μm	<u>4522</u>	+	<u>239</u>	= <u>4761</u>

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: MP3064 Lot No.: 20070 Exp. Date: 2-13-22
 - ii. High AC Known Value ≥ 0.25 AC: 0.300 AC
Sim. SN: MP5317 Lot No.: 202012A Exp. Date: 12-8-22
 - b. Dry Calibration Check: Known Value 0.08 AC
Lot No. 24119080A1 Cyl No. 5 Exp. Date: 11-5-21
Test 1 0.080 AC Test 4 0.080 AC Test 7 0.079 AC
Test 2 0.081 AC Test 5 0.080 AC Test 8 0.079 AC
Test 3 0.081 AC Test 6 0.079 AC Test 9 0.078 AC
Average 0.080 AC
 - c. 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: * NO READING AT 10 L/MIN. FLOW SENSOR CHANGES BUT NO AIR FLOW REGISTERS. ** AIR FLOW REGISTERS AT 12 L/MIN.
CLASS ROOM ONLY UNTIL FLOW SENSOR REPAIRED

Instrument is acceptable to be used in the field. No

NOTE: FLOW SENSOR CALIBRATION DUE TO FLOW SENSOR READING 74.

Charles E. Ed
Breath Analyst Signature

6/14/21
Date

Kali L. Hiet
Reviewed by

6-14-21
Date

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

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-003057
Location = TOXL 8164.14.00 09/16
06/14/2021 09:51

Flow Rate Calibration*****

- 1: Rate (Liters/min) = 5
 SQRT(Diff) = 1.000
- 2: Rate (Liters/min) = 15
 SQRT(Diff) = 6.242
- 3: Rate (Liters/min) = 30
 SQRT(Diff) = 19.336

← FLOW SENSOR STILL
FUNCTIONAL BUT
READING LOW.
CEE

Dependent Data Scale Factor = 100000 L/min
Independent Data Scale Factor = 256
Rounded Slope = 516
Rounded Intercept = 495821
Correlation = 0.99190



TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-003057
 06/14/2021 11:02:04

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	0.0920	(0.0120)	0.0750	(0.0220)	
Sample #2	0.0850	(0.0830)	0.0910	(0.0320)	
Sample #3	0.0960	(0.1200)	0.1140	(0.0350)	
Sample #4	0.0890	(0.1430)	0.0830	(0.0420)	
Avg % Abs	0.0900	(0.1153)	0.0960	(0.0363)	
STD DEV	0.0056	(0.0303)	0.0161	(0.0051)	
REL STD DEV	6.186	(26.247)	16.764	(14.124)	

Solution = 0.041 g/210L or 0.1952 mg/l, Samples = 4, Discarded = 1					
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)	
Sample #1	0.7840	(-0.0040)	1.4410	(-0.0080)	
Sample #2	0.8140	(0.0070)	1.4570	(0.0150)	
Sample #3	0.7750	(0.0380)	1.4510	(0.0230)	
Sample #4	0.7970	(0.0480)	1.4400	(0.0180)	
Avg % Abs	0.7953	(0.0310)	1.4493	(0.0187)	
STD DEV	0.0196	(0.0214)	0.0086	(0.0040)	
REL STD DEV	2.459	(68.960)	0.595	(21.651)	

Solution = 0.080 g/210L or 0.3810 mg/l, Samples = 4, Discarded = 1					
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)	
Sample #1	1.5090	(-0.0270)	2.7620	(0.0090)	
Sample #2	1.5210	(-0.0100)	2.7660	(0.0230)	
Sample #3	1.4850	(0.0150)	2.7400	(0.0420)	
Sample #4	1.5050	(-0.0070)	2.7460	(0.0430)	
Avg % Abs	1.5037	(-0.0007)	2.7507	(0.0360)	
STD DEV	0.0180	(0.0137)	0.0136	(0.0113)	
REL STD DEV	1.200	(2047.559)	0.495	(31.304)	

Solution = 0.102 g/210L or 0.4857 mg/l, Samples = 4, Discarded = 1					
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)	
Sample #1	1.9020	(-0.0250)	3.4840	(-0.0110)	
Sample #2	1.9210	(-0.0110)	3.4810	(-0.0110)	
Sample #3	1.9400	(-0.0060)	3.4970	(-0.0040)	
Sample #4	1.8950	(0.0150)	3.4630	(0.0150)	
Avg % Abs	1.9187	(-0.0007)	3.4803	(0.0000)	
STD DEV	0.0226	(0.0138)	0.0170	(0.0135)	
REL STD DEV	1.177	(2069.420)	0.489	(0.000)	

Solution = 0.298 g/210L or 1.4190 mg/l, Samples = 4, Discarded = 1					
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)	
Sample #1	5.3310	(-0.0190)	9.5720	(-0.0120)	
Sample #2	5.3380	(-0.0020)	9.6040	(0.0040)	
Sample #3	5.3420	(0.0030)	9.6360	(0.0140)	
Sample #4	5.3200	(0.0250)	9.6190	(0.0150)	
Avg % Abs	5.3333	(0.0087)	9.6197	(0.0110)	
STD DEV	0.0117	(0.0144)	0.0160	(0.0061)	
REL STD DEV	0.220	(165.742)	0.166	(55.298)	

TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-003057
 06/14/2021 11:02:04

Auto Calibration

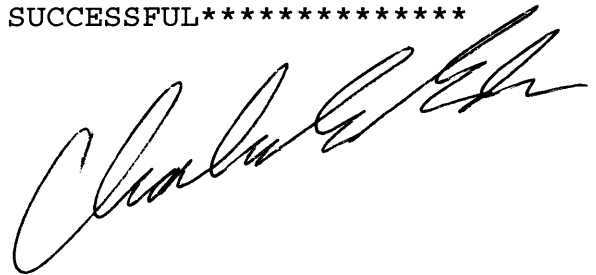
pg 2 of 2

<<<<< 3um >>>>>			<<<<< 9um >>>>>		
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Zero Order Coef	-207.06		Zero Order Coef	-123.54	
First Order Coef	2641.69		First Order Coef	1405.15	
Second Order Coef	10.74		Second Order Coef	8.59	
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Act	Fit	Residual	Act	Fit	Residual
(g/210L)	(g/210L)	(g/210L)	(g/210L)	(g/210L)	(g/210L)
0.000	0.001	-0.0006	0.000	0.000	-0.0002
0.041	0.040	0.0011	0.041	0.041	0.0004
0.080	0.080	0.0004	0.080	0.080	0.0001
0.102	0.103	-0.0009	0.102	0.102	-0.0003
0.298	0.298	0.0001	0.298	0.298	0.0000
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<<<<< 3um >>>>>		<<<<< 9um >>>>>	
-----		-----	
Solution = 0.100 g/210L or 0.4762 mg/l, Samples = 4, Discarded = 1			
Sample			
Sample #1	4371.00	4510.00	
Sample #2	4417.00	4536.00	
Sample #3	4412.00	4532.00	
Sample #4	4402.00	4498.00	
Avg	4410.3335	4522.0000	
STD DEV	7.6376	20.8806	
REL STD DEV	0.173	0.462	
H2O adjust (mg/l*10k)	351	239	

Atmospheric Pressure = 961

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



TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-003057
 06/14/2021 11:02:04

Auto Calibration
 Max Power Res Value = 40
 Auto Range Res Value = 19

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

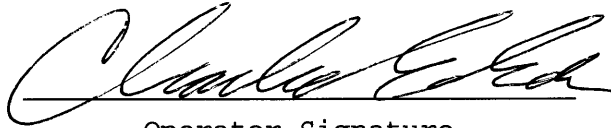
CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-003057
Location = TOXL 8164.14.00 09/16
06/14/2021 11:51

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	11:51
02 Std. Sol.	0.020	11:52
03 Room Air	0.000	11:52
04 Std. Sol.	0.020	11:53
05 Room Air	0.000	11:54
06 Std. Sol.	0.020	11:54
07 Room Air	0.000	11:55

08 Sim Temp = 34.0°C

Simul Ser No = MP3064
Std Sol No = 20070
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

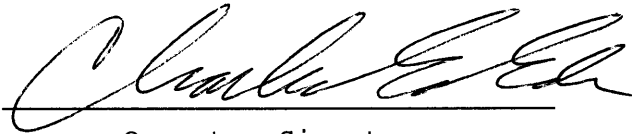
CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-003057
Location = TOXL 8164.14.00 09/16
06/14/2021 12:03

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	12:03
02 Std. Sol.	0.303	12:04
03 Room Air	0.000	12:05
04 Std. Sol.	0.301	12:05
05 Room Air	0.000	12:06
06 Std. Sol.	0.301	12:06
07 Room Air	0.000	12:07

08 Sim Temp = 34.0°C

Simul Ser No = MP5317 *CEE*
Std Sol No = 202012A
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

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 80-003057
Location = TOXL 8164.14.00 09/16
06/14/2021 12:10

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	12:11
02 Std. Gas	0.080	12:11
03 Room Air	0.000	12:11
04 Std. Gas	0.081	12:12
05 Room Air	0.000	12:12
06 Std. Gas	0.081	12:13
07 Room Air	0.000	12:13

Lot No = 24119080A1
Cyl No = 5
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 80-003057
Location = TOXL 8164.14.00 09/16
06/14/2021 12:13

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	12:14
02 Std. Gas	0.080	12:14
03 Room Air	0.000	12:15
04 Std. Gas	0.080	12:15
05 Room Air	0.000	12:16
06 Std. Gas	0.079	12:16
07 Room Air	0.000	12:16

Lot No = 24119080A1
Cyl No = 5
Exp Date = 11/05/2021
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks: CALIBRATION CHECK
0.080 AC

Form 106-I8000

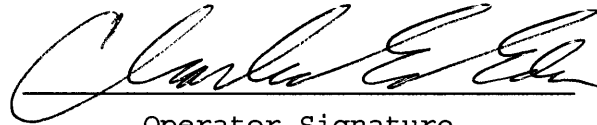
Intoxilyzer Test Record and Checklist
NDOAG Crime Lab. Div., Bismarck, ND 58501

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-003057
Location = TOXL 8164.14.00 09/16
06/14/2021 12:17

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	12:17
02 Std. Gas	0.079	12:18
03 Room Air	0.000	12:18
04 Std. Gas	0.079	12:19
05 Room Air	0.000	12:19
06 Std. Gas	0.078	12:19
07 Room Air	0.000	12:20

Lot No = 24119080A1
Cyl No = 5
Exp Date = 11/05/2021
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks: CALIBRATION CHECK
0.080 AC

Form 106-I8000