

INTOXILYZER® 8000 CALIBRATION ADJUSTMENT

Intoxilyzer® 8000 Serial Number: 80-005362 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: $0.156 \text{ L/S} \times 60 \text{ Sec/min} = \underline{9.36} \text{ L/min}$
 - b. 20 L/min: $0.320 \text{ L/S} \times 60 \text{ Sec/min} = \underline{19.2} \text{ L/min}$
 - c. Flow Rates within $\pm 1 \text{ L/min}$ of Expected Value
- B. Gas Tank Sensor Check (Level 3,D,G)
1. Display: 926 psi Regulator: 950 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
4	0.150 (0.151)	201811E	11.26.20	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. 4 Exp. Date: 8.5.20
4. Atmospheric Pressure
 - a. 924 mbar Displayed by Intoxilyzer® 8000
 - b. 949 mbar Adjusted to using barometer
 - c. 949 948 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>4370</u>	+	<u>391</u>	=	<u>4761</u>
9 μm	<u>4382</u>	+	<u>379</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: MP3061 Lot No.: 201810D Exp. Date: 10.24.20
 - ii. High AC Known Value ≥ 0.25 AC: 0.250 AC
 Sim. SN: MP3067 Lot No.: 201911B 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 0.080 AC Test 4 0.080 AC Test 7 0.080 AC
 Test 2 0.079 AC Test 5 0.080 AC Test 8 0.079 AC
 Test 3 0.079 AC Test 6 0.080 AC Test 9 0.079 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: CALIBRATION ADJUSTMENT DUE TO
ATMOSPHERIC MONITOR READING 929 mbar AND ACTUAL
ATMOSPHERIC PRESSURE IS 949 mbar.

Instrument is acceptable to be used in the field.

Charles E. Ed
 Breath Analyst Signature

5/26/2020
 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 80-005362
Location = TOXL 8164.14.00 09/16
05/22/2020 14:43

Flow Rate Calibration*****

1: Rate (Liters/min) = 5

 SQRT(Diff)) = 7.000

2: Rate (Liters/min) = 15

 SQRT(Diff)) = 12.039

3: Rate (Liters/min) = 30

 SQRT(Diff)) = 21.656

Dependent Data Scale Factor = 100000 L/min

Independent Data Scale Factor = 256

Rounded Slope = 659

Rounded Intercept = -620990

Correlation = 0.99799



TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-005362
 05/26/2020 15:52:25

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	0.1040	(0.0200)	0.2000	(-0.0200)	
Sample #2	0.0430	(0.0840)	0.1510	(0.0270)	
Sample #3	0.0580	(0.1090)	0.1540	(0.0290)	
Sample #4	0.0960	(0.1190)	0.1800	(0.0110)	
Avg % Abs	0.0657	(0.1040)	0.1617	(0.0223)	
STD DEV	0.0273	(0.0180)	0.0159	(0.0099)	
REL STD DEV	41.603	(17.334)	9.865	(44.175)	

Solution = 0.040 g/210L or 0.1905 mg/l, Samples = 4, Discarded = 1					
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)	
Sample #1	0.7960	(-0.0160)	1.5310	(-0.0020)	
Sample #2	0.8210	(0.0100)	1.4950	(0.0290)	
Sample #3	0.8300	(0.0060)	1.4820	(0.0420)	
Sample #4	0.8050	(0.0340)	1.5190	(0.0330)	
Avg % Abs	0.8187	(0.0167)	1.4987	(0.0347)	
STD DEV	0.0127	(0.0151)	0.0188	(0.0067)	
REL STD DEV	1.547	(90.863)	1.252	(19.207)	

Solution = 0.081 g/210L or 0.3857 mg/l, Samples = 4, Discarded = 1					
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)	
Sample #1	1.5040	(0.0280)	2.8350	(0.0150)	
Sample #2	1.5140	(0.0310)	2.7800	(0.0420)	
Sample #3	1.4870	(0.0530)	2.7990	(0.0440)	
Sample #4	1.5470	(0.0360)	2.8160	(0.0470)	
Avg % Abs	1.5160	(0.0400)	2.7983	(0.0443)	
STD DEV	0.0300	(0.0115)	0.0180	(0.0025)	
REL STD DEV	1.982	(28.831)	0.644	(5.677)	

Solution = 0.151 g/210L or 0.7190 mg/l, Samples = 4, Discarded = 1					
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)	
Sample #1	2.7930	(-0.0400)	5.0540	(-0.0180)	
Sample #2	2.7390	(0.0080)	5.0400	(0.0140)	
Sample #3	2.7350	(0.0260)	4.9850	(0.0450)	
Sample #4	2.7870	(-0.0160)	4.9780	(0.0530)	
Avg % Abs	2.7537	(0.0060)	5.0010	(0.0373)	
STD DEV	0.0289	(0.0211)	0.0340	(0.0206)	
REL STD DEV	1.051	(351.189)	0.679	(55.177)	

Solution = 0.298 g/210L or 1.4190 mg/l, Samples = 4, Discarded = 1					
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)	
Sample #1	5.3180	(0.0190)	9.5630	(0.0300)	
Sample #2	5.2820	(0.0710)	9.4940	(0.0860)	
Sample #3	5.3500	(0.0400)	9.5530	(0.0730)	
Sample #4	5.3430	(0.0500)	9.5130	(0.0900)	
Avg % Abs	5.3250	(0.0537)	9.5200	(0.0830)	
STD DEV	0.0374	(0.0158)	0.0301	(0.0089)	
REL STD DEV	0.702	(29.482)	0.316	(10.709)	

TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-005362
 05/26/2020 15:52:25

Auto Calibration

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<<<<<      3um      >>>>>
-----
Zero Order Coef   -208.83
First Order Coef  2655.08
Second Order Coef  9.36
-----
Act      Fit      Residual
(g/210L) (g/210L)  (g/210L)
0.000    -0.001    0.0007
0.040     0.041   -0.0014
0.081     0.081    0.0004
0.151     0.151    0.0004
0.298     0.298   -0.0001
-----
  
```

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<<<<<      9um      >>>>>
-----
Zero Order Coef   -253.70
First Order Coef  1449.60
Second Order Coef  7.14
-----
Act      Fit      Residual
(g/210L) (g/210L)  (g/210L)
0.000    -0.000    0.0004
0.040     0.041   -0.0006
0.081     0.081   -0.0000
0.151     0.151    0.0003
0.298     0.298   -0.0001
-----
  
```

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<<<<<      3um      >>>>>
-----
Solution = 0.100 g/210L or 0.4762 mg/l, Samples = 4, Discarded = 1
Sample
Sample #1          4409.00
Sample #2          4297.00
Sample #3          4459.00
Sample #4          4354.00
Avg                4370.0000
STD DEV            82.1766
REL STD DEV        1.880
H2O adjust (mg/l*10k) 391
  
```

```

<<<<<      9um      >>>>>
-----
Solution = 0.100 g/210L or 0.4762 mg/l, Samples = 4, Discarded = 1
Sample
Sample #1          4460.00
Sample #2          4322.00
Sample #3          4433.00
Sample #4          4391.00
Avg                4382.0000
STD DEV            56.0446
REL STD DEV        1.279
H2O adjust (mg/l*10k) 379
  
```

Atmospheric Pressure = 949

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



TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-005362
 05/26/2020 15:52:25

Auto Calibration
 Max Power Res Value = 47
 Auto Range Res Value = 31

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

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-005362
Location = TOXL 8164.14.00 09/16
05/26/2020 16:35

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	16:35
02 Std. Sol.	0.020	16:36
03 Room Air	0.000	16:37
04 Std. Sol.	0.020	16:37
05 Room Air	0.000	16:38
06 Std. Sol.	0.019	16:39
07 Room Air	0.000	16:39

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 80-005362
Location = TOXL 8164.14.00 09/16
05/26/2020 16:40

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	16:41
02 Std. Sol.	0.247	16:42
03 Room Air	0.000	16:42
04 Std. Sol.	0.247	16:43
05 Room Air	0.000	16:43
06 Std. Sol.	0.246	16:44
07 Room Air	0.000	16:45

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 80-005362
Location = TOXL 8164.14.00 09/16
05/26/2020 16:46

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	16:46
02 Std. Gas	0.080	16:46
03 Room Air	0.000	16:47
04 Std. Gas	0.079	16:47
05 Room Air	0.000	16:48
06 Std. Gas	0.079	16:48
07 Room Air	0.000	16:49

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 80-005362
Location = TOXL 8164.14.00 09/16
05/26/2020 16:49

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	16:49
02 Std. Gas	0.080	16:50
03 Room Air	0.000	16:50
04 Std. Gas	0.080	16:51
05 Room Air	0.000	16:51
06 Std. Gas	0.080	16:52
07 Room Air	0.000	16:52

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

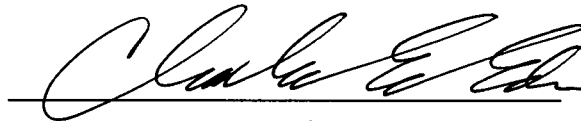
Intoxilyzer Test Record and Checklist
NDOAG Crime Lab. Div., Bismarck, ND 58501

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-005362
Location = TOXL 8164.14.00 09/16
05/26/2020 16:52

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	16:53
02 Std. Gas	0.080	16:53
03 Room Air	0.000	16:54
04 Std. Gas	0.079	16:54
05 Room Air	0.000	16:55
06 Std. Gas	0.079	16:55
07 Room Air	0.000	16:55

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