

INTOXILYZER® 8000 CALIBRATION ADJUSTMENT

Intoxilyzer® 8000 Serial Number: 80-00 4940 Location: TOXL

- A. Flow Sensor Calibration and Verification Check (Level 3,M,C,F)
1. Replaced o-rings if damaged ^{ADJUST}
 2. Flow Meter Serial Number: 40655 ^{VERIFY} 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. 160 L/S X 60 Sec/min = 9.60 L/min
 - b. 20 L/min: 0. 312 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: 697 psi Regulator: 700 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	20060	2-10-22	DR7347
3	0.080	19100	3-26-21	DR5114
4	0.150	20150	3-16-22	DR5131
5	0.300(0.298)	20030	1-21-22	DR7346

3. 0.100 AC Calibration Gas for H₂O Adjustment
 - a. Lot No. 13518100 A3 Cyl No. 6 Exp. Date: 8-5-20
4. Atmospheric Pressure
 - a. 905 mbar Displayed by Intoxilyzer® 8000
 - b. 945 mbar Adjusted to using barometer
 - c. 944 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>4378</u>	+	<u>383</u>		=	<u>4761</u>
9 μ m	<u>4400</u>	+	<u>361</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.: 201911B Exp. Date: 11.5.21
- b. Dry Calibration Check: Known Value 0.08 AC
 Lot No. 1351808046 Cyl No. 33 Exp. Date: 8.5.20
 Test 1 0.079 AC Test 4 0.080 AC Test 7 0.079 AC
 Test 2 0.080 AC Test 5 0.079 AC Test 8 0.080 AC
 Test 3 0.080 AC Test 6 0.079 AC Test 9 0.080 AC
 Average 0.080 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: REPLACED SIMULATOR RETURN O-RING,
ADJUSTMENT CALIBRATION DUE TO mbar reading of 905 VS. ACTUAL
READING OF 945 mbar.

Instrument is acceptable to be used in the field.

Charles E. Ed
 Breath Analyst Signature

4/6/20
 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 80-004940
Location = TOXL 8164.14.00 09/16
04/06/2020 13:23

Flow Rate Calibration*****

1: Rate (Liters/min) = 5
 SQRT(Diff)) = 7.141
2: Rate (Liters/min) = 15
 SQRT(Diff)) = 12.121
3: Rate (Liters/min) = 30
 SQRT(Diff)) = 22.270

Dependent Data Scale Factor = 100000 L/min

Independent Data Scale Factor = 256

Rounded Slope = 635

Rounded Intercept = -585462

Correlation = 0.99682



TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-004940
 04/06/2020 13:31:57

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	0.0610	(0.0020)	0.1430	(0.0120)	
Sample #2	0.0680	(0.0340)	0.1600	(0.0050)	
Sample #3	0.0440	(0.0820)	0.1540	(0.0270)	
Sample #4	0.0690	(0.0900)	0.1510	(0.0190)	
Avg % Abs	0.0603	(0.0687)	0.1550	(0.0170)	
STD DEV	0.0142	(0.0303)	0.0046	(0.0111)	
REL STD DEV	23.460	(44.108)	2.957	(65.503)	

Solution = 0.040 g/210L or 0.1905 mg/l, Samples = 4, Discarded = 1					
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)	
Sample #1	0.8130	(-0.0150)	1.5380	(-0.0180)	
Sample #2	0.8110	(0.0020)	1.5610	(-0.0180)	
Sample #3	0.8020	(0.0060)	1.5460	(-0.0110)	
Sample #4	0.7900	(0.0310)	1.5440	(-0.0040)	
Avg % Abs	0.8010	(0.0130)	1.5503	(-0.0110)	
STD DEV	0.0105	(0.0157)	0.0093	(0.0070)	
REL STD DEV	1.315	(120.894)	0.599	(63.636)	

Solution = 0.080 g/210L or 0.3810 mg/l, Samples = 4, Discarded = 1					
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)	
Sample #1	1.4610	(0.0110)	2.8780	(0.0130)	
Sample #2	1.5040	(-0.0020)	2.9130	(-0.0090)	
Sample #3	1.5290	(-0.0010)	2.9060	(0.0050)	
Sample #4	1.5260	(0.0070)	2.9020	(0.0200)	
Avg % Abs	1.5197	(0.0013)	2.9070	(0.0053)	
STD DEV	0.0137	(0.0049)	0.0056	(0.0145)	
REL STD DEV	0.898	(369.966)	0.192	(271.929)	

Solution = 0.150 g/210L or 0.7143 mg/l, Samples = 4, Discarded = 1					
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)	
Sample #1	2.6850	(0.0190)	5.1620	(0.0000)	
Sample #2	2.7020	(0.0300)	5.1460	(0.0140)	
Sample #3	2.7140	(0.0130)	5.1430	(-0.0060)	
Sample #4	2.7290	(0.0380)	5.1770	(-0.0080)	
Avg % Abs	2.7150	(0.0270)	5.1553	(0.0000)	
STD DEV	0.0135	(0.0128)	0.0188	(0.0122)	
REL STD DEV	0.498	(47.286)	0.365	(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	5.2030	(-0.0220)	9.6630	(-0.0280)	
Sample #2	5.2150	(0.0130)	9.7370	(-0.0100)	
Sample #3	5.2140	(0.0060)	9.7230	(-0.0080)	
Sample #4	5.2100	(0.0180)	9.7180	(0.0040)	
Avg % Abs	5.2130	(0.0123)	9.7260	(-0.0047)	
STD DEV	0.0026	(0.0060)	0.0098	(0.0076)	
REL STD DEV	0.051	(48.873)	0.101	(162.255)	

TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-004940
 04/06/2020 13:31:57

Auto Calibration

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 Zero Order Coef -179.93
 First Order Coef 2602.46
 Second Order Coef 29.82

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

 Zero Order Coef -223.78
 First Order Coef 1358.68
 Second Order Coef 12.72

Act (g/210L)	Fit (g/210L)	Residual (g/210L)
0.000	-0.000	0.0005
0.040	0.040	-0.0004
0.080	0.081	-0.0007
0.150	0.149	0.0008
0.298	0.298	-0.0001

Act (g/210L)	Fit (g/210L)	Residual (g/210L)
0.000	-0.000	0.0003
0.040	0.040	-0.0002
0.080	0.081	-0.0005
0.150	0.149	0.0005
0.298	0.298	-0.0001

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

 Solution = 0.100 g/210L or 0.4762 mg/l, Samples = 4, Discarded = 1
 Sample
 Sample #1 4387.00 4399.00
 Sample #2 4410.00 4414.00
 Sample #3 4338.00 4358.00
 Sample #4 4387.00 4430.00
 Avg 4378.3335 4400.6665
 STD DEV 36.7741 37.8065
 REL STD DEV 0.840 0.859
 H2O adjust (mg/l*10k) 383 361

Atmospheric Pressure = 944

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



TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-004940
 04/06/2020 13:31:57

Auto Calibration
 Max Power Res Value = 31
 Auto Range Res Value = 14

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

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-004940
Location = TOXL 8164.14.00 09/16
04/06/2020 14:18

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	14:19
02 Std. Sol.	0.019	14:19
03 Room Air	0.000	14:20
04 Std. Sol.	0.019	14:21
05 Room Air	0.000	14:21
06 Std. Sol.	0.019	14:22
07 Room Air	0.000	14:22

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 80-004940
Location = TOXL 8164.14.00 09/16
04/06/2020 14:24

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	14:25
02 Std. Sol.	0.256	14:25
03 Room Air	0.000	14:26
04 Std. Sol.	0.257	14:27
05 Room Air	0.000	14:27
06 Std. Sol.	0.257	14:28
07 Room Air	0.000	14:29

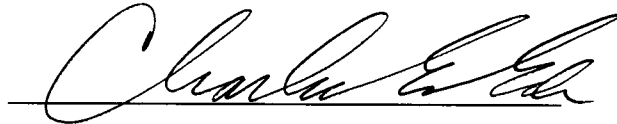
08 Sim Temp = 34.0°C

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 80-004940
Location = TOXL 8164.14.00 09/16
04/06/2020 14:31

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	14:32
02 Std. Gas	0.079	14:32
03 Room Air	0.000	14:33
04 Std. Gas	0.080	14:33
05 Room Air	0.000	14:34
06 Std. Gas	0.080	14:34
07 Room Air	0.000	14:34

Lot No = 13518080A6
Cyl No = 33
Exp Date = 08/05/2020
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 80-004940
Location = TOXL 8164.14.00 09/16
04/06/2020 14:35

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	14:35
02 Std. Gas	0.080	14:36
03 Room Air	0.000	14:36
04 Std. Gas	0.079	14:37
05 Room Air	0.000	14:37
06 Std. Gas	0.079	14:37
07 Room Air	0.000	14:38

Lot No = 13518080A6
Cyl No = 33
Exp Date = 08/05/2020
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 80-004940
Location = TOXL 8164.14.00 09/16
04/06/2020 14:38

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	14:39
02 Std. Gas	0.079	14:39
03 Room Air	0.000	14:40
04 Std. Gas	0.080	14:40
05 Room Air	0.000	14:41
06 Std. Gas	0.080	14:41
07 Room Air	0.000	14:41

Lot No = 13518080A6
Cyl No = 33
Exp Date = 08/05/2020
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks:

CALIBRATION CHECK
0.080 AC

Form 106-18000