

INTOXILYZER® 8000 CALIBRATION ADJUSTMENT

Intoxilyzer® 8000 Serial Number: 80-004204 Location: TOXL

- A. Flow Sensor Calibration and Verification Check (Level 3,M,C,F)
1. Replaced o-rings if damaged VERIFY ADJUST
 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: $0.167 \text{ L/S} \times 60 \text{ Sec/min} = \underline{10.02} \text{ L/min}$
 - 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: 669 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. 947 mbar Displayed by Intoxilyzer® 8000
 - b. 957 mbar Adjusted to using barometer
 - c. 957 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>4245</u>	<u>516</u>		<u>4761</u>
9 μ m	<u>4278</u>	<u>483</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.: 201810 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 0.080 AC
Test 2 0.079 AC Test 5 0.080 AC Test 8 0.080 AC
Test 3 0.080 AC Test 6 0.080 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: CALIBRATION ADJUSTMENT DUE TO
ATMOSPHERIC MONITOR READING 947 mbar BUT ACTUAL
ATMOSPHERIC PRESSURE IS 957 mbar.

Instrument is acceptable to be used in the field.

Charles E. Ehr
Breath Analyst Signature

4.15.20
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 80-004204
Location = TOXL 8164.14.00 09/16
04/15/2020 09:00

Flow Rate Calibration*****

1: Rate (Liters/min) = 5
 SQRT(Diff) = 7.348
2: Rate (Liters/min) = 15
 SQRT(Diff) = 12.367
3: Rate (Liters/min) = 30
 SQRT(Diff) = 22.043

Dependent Data Scale Factor = 100000 L/min

Independent Data Scale Factor = 256

Rounded Slope = 657

Rounded Intercept = -673032

Correlation = 0.99782



TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-004204
 04/15/2020 09:28:37

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	0.1550	(0.0110)	0.2370	(-0.0170)	
Sample #2	0.1340	(0.0500)	0.2350	(-0.0060)	
Sample #3	0.1060	(0.0840)	0.1890	(0.0300)	
Sample #4	0.1020	(0.0960)	0.2160	(0.0180)	
Avg % Abs	0.1140	(0.0767)	0.2133	(0.0140)	
STD DEV	0.0174	(0.0239)	0.0231	(0.0183)	
REL STD DEV	15.294	(31.123)	10.835	(130.931)	

Solution = 0.040 g/210L or 0.1905 mg/l, Samples = 4, Discarded = 1					
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)	
Sample #1	0.8210	(-0.0120)	1.5890	(-0.0110)	
Sample #2	0.8290	(0.0280)	1.5990	(0.0020)	
Sample #3	0.8350	(0.0300)	1.6160	(0.0070)	
Sample #4	0.8050	(0.0280)	1.5840	(0.0240)	
Avg % Abs	0.8230	(0.0287)	1.5997	(0.0110)	
STD DEV	0.0159	(0.0012)	0.0160	(0.0115)	
REL STD DEV	1.929	(4.028)	1.001	(104.841)	

Solution = 0.080 g/210L or 0.3810 mg/l, Samples = 4, Discarded = 1					
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)	
Sample #1	1.6010	(-0.0290)	2.9930	(-0.0140)	
Sample #2	1.5360	(0.0140)	2.9750	(0.0070)	
Sample #3	1.5880	(0.0000)	3.0040	(0.0030)	
Sample #4	1.5680	(0.0040)	2.9820	(0.0080)	
Avg % Abs	1.5640	(0.0060)	2.9870	(0.0060)	
STD DEV	0.0262	(0.0072)	0.0151	(0.0026)	
REL STD DEV	1.677	(120.185)	0.507	(44.096)	

Solution = 0.150 g/210L or 0.7143 mg/l, Samples = 4, Discarded = 1					
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)	
Sample #1	2.7860	(-0.0230)	5.3140	(-0.0230)	
Sample #2	2.7610	(0.0100)	5.2880	(0.0240)	
Sample #3	2.7430	(0.0200)	5.3040	(0.0160)	
Sample #4	2.7410	(0.0140)	5.2740	(0.0310)	
Avg % Abs	2.7483	(0.0147)	5.2887	(0.0237)	
STD DEV	0.0110	(0.0050)	0.0150	(0.0075)	
REL STD DEV	0.401	(34.317)	0.284	(31.714)	

Solution = 0.298 g/210L or 1.4190 mg/l, Samples = 4, Discarded = 1					
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)	
Sample #1	5.2960	(0.0160)	9.8910	(0.0140)	
Sample #2	5.2890	(0.0390)	9.9480	(0.0200)	
Sample #3	5.2880	(0.0370)	9.9890	(0.0070)	
Sample #4	5.3320	(0.0090)	9.9610	(0.0050)	
Avg % Abs	5.3030	(0.0283)	9.9660	(0.0107)	
STD DEV	0.0251	(0.0168)	0.0210	(0.0081)	
REL STD DEV	0.474	(59.199)	0.210	(76.355)	

TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-004204
 04/15/2020 09:28:37

Auto Calibration

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

 Zero Order Coef -310.94
 First Order Coef 2653.31
 Second Order Coef 15.55

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

 -287.30
 1346.30
 10.69

Act (g/210L)	Fit (g/210L)	Residual (g/210L)
0.000	-0.000	0.0002
0.040	0.040	0.0005
0.080	0.081	-0.0014
0.150	0.149	0.0009
0.298	0.298	-0.0001

Act (g/210L)	Fit (g/210L)	Residual (g/210L)
0.000	0.000	-0.0000
0.040	0.040	0.0002
0.080	0.080	-0.0004
0.150	0.150	0.0002
0.298	0.298	-0.0000

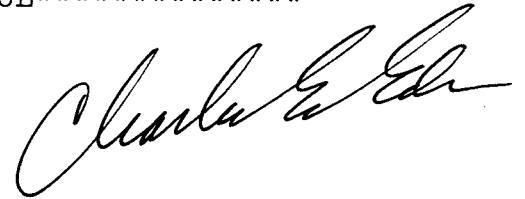
<<<<< 3um >>>>> <<<<< 9um >>>>>

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

Sample	3um	9um
Sample #1	4272.00	4265.00
Sample #2	4291.00	4290.00
Sample #3	4166.00	4248.00
Sample #4	4280.00	4298.00
Avg	4245.6665	4278.6665
STD DEV	69.2122	26.8576
REL STD DEV	1.630	0.628
H2O adjust (mg/l*10k)	516	483

Atmospheric Pressure = 957

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



TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-004204
 04/15/2020 09:28:37

Auto Calibration
 Max Power Res Value = 33
 Auto Range Res Value = 22

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

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-004204
Location = TOXL 8164.14.00 09/16
04/15/2020 10:14

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	10:15
02 Std. Sol.	0.019	10:15
03 Room Air	0.000	10:16
04 Std. Sol.	0.019	10:17
05 Room Air	0.000	10:17
06 Std. Sol.	0.019	10:18
07 Room Air	0.000	10:18

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 80-004204
Location = TOXL 8164.14.00 09/16
04/15/2020 10:20

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	10:20
02 Std. Sol.	0.248	10:21
03 Room Air	0.000	10:22
04 Std. Sol.	0.248	10:22
05 Room Air	0.000	10:23
06 Std. Sol.	0.248	10:24
07 Room Air	0.000	10:24

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 80-004204
Location = TOXL 8164.14.00 09/16
04/15/2020 10:26

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	10:27
02 Std. Gas	0.079	10:27
03 Room Air	0.000	10:28
04 Std. Gas	0.079	10:28
05 Room Air	0.000	10:29
06 Std. Gas	0.080	10:29
07 Room Air	0.000	10:30

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 80-004204
Location = TOXL 8164.14.00 09/16
04/15/2020 10:31

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	10:32
02 Std. Gas	0.080	10:32
03 Room Air	0.000	10:33
04 Std. Gas	0.080	10:33
05 Room Air	0.000	10:33
06 Std. Gas	0.080	10:34
07 Room Air	0.000	10:34

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 80-004204
Location = TOXL 8164.14.00 09/16
04/15/2020 10:34

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	10:35
02 Std. Gas	0.080	10:35
03 Room Air	0.000	10:36
04 Std. Gas	0.080	10:36
05 Room Air	0.000	10:37
06 Std. Gas	0.080	10:37
07 Room Air	0.000	10:38

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