

INTOXILYZER® 8000 CALIBRATION ADJUSTMENT

Intoxilyzer® 8000 Serial Number: 80-007093 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 ^{ADJUST} & 55260 ^{VERIFY}
 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 \geq 0.99000
 5. Flow Sensor Calibration Verification (Level 3,D,F)
 - a. 10 L/min: 0. 160 L/S X 60 Sec/min = 9.6 L/min
 - b. 20 L/min: 0. 320 L/S X 60 Sec/min = 19.2 L/min
 - c. Flow Rates within \pm 1 L/min of Expected Value
- B. Gas Tank Sensor Check (Level 3,D,G)
1. Display: 995 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 \geq 10
 - b. Auto Range Res Value \geq 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	NA – MilliQ H ₂ O	NA – MilliQ H ₂ O	MP3066
2	0.040	201808D	8.22.20	MP3067
3	0.080	201707E	7.25.19	MP3068
4	0.150	201811E	11.26.20	MP3069
5	0.300	201803H	3.22.20	MP3070

3. 0.100 AC Calibration Gas for H₂O Adjustment
 - a. Lot No. 1351810043 Cyl No. 6 Exp. Date: 8.5.20
4. Atmospheric Pressure
 - a. 942 mbar Displayed by Intoxilyzer® 8000
 - b. 942 mbar Adjusted to using barometer
 - c. 941 942 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>4323</u>	+	<u>438</u>	=	<u>4761</u>
9 μm	<u>4121</u>	+	<u>640</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: 0.015 AC
Sim. SN: DR5113 Lot No.: 201805C Exp. Date: 5.30.20
 - ii. High AC Known Value ≥ 0.25 AC: 0.300 AC
Sim. SN: DR7089 Lot No.: 17350 Exp. Date: 10.11.19
 - b. Dry Calibration Check: Known Value 0.08 AC
Lot No. 34418080A2 Cyl No. 45 Exp. Date: 2.5.21
Test 1 0.082 AC Test 4 0.081 AC Test 7 0.081 AC
Test 2 0.079 AC Test 5 0.079 AC Test 8 0.080 AC
Test 3 0.079 AC Test 6 0.079 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 ADJUST WAS DONE DUE TO STABILITY TEST DURING INITIAL INSPECTION DETERMINED AN AVERAGE VALUE OF 0.076 AC FOR AN 0.080 AC STANDARD. STILL WITHIN TOLERANCE, BUT CLOSE TO ± 0.005 AC.

Instrument is acceptable to be used in the field.

Charles E. Edr
Breath Analyst Signature

6.7.2019
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 80-007093
Location = TOXL 8164.16.00 09/18
06/07/2019 13:13

Flow Rate Calibration*****

- 1: Rate (Liters/min) = 5
 SQRT(Diff)) = 7.277
- 2: Rate (Liters/min) = 15
 SQRT(Diff)) = 12.246
- 3: Rate (Liters/min) = 30
 SQRT(Diff)) = 22.359

Dependent Data Scale Factor = 100000 L/min

Independent Data Scale Factor = 256

Rounded Slope = 638

Rounded Intercept = -611758

Correlation = 0.99684

Charles E. Eh

6/7/2019

Flow CALIBRATION ADJUST

TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-007093
 06/07/2019 13:23:31

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	0.0540	(-0.0150)		0.1710	(-0.0220)	
Sample #2	0.0510	(0.0280)		0.1650	(-0.0010)	
Sample #3	0.0240	(0.0520)		0.1420	(0.0040)	
Sample #4	0.0170	(0.0620)		0.1560	(-0.0020)	
Avg % Abs	0.0307	(0.0473)		0.1543	(0.0003)	
STD DEV	0.0180	(0.0175)		0.0116	(0.0032)	
REL STD DEV	58.544	(36.916)		7.510	(964.365)	

Solution = 0.040 g/210L or 0.1905 mg/l, Samples = 4, Discarded = 1						
Sample	% Abs	(% Abs Ref)		% Abs	(% Abs Ref)	
Sample #1	0.7210	(0.0060)		1.4670	(0.0000)	
Sample #2	0.7400	(0.0030)		1.4890	(-0.0120)	
Sample #3	0.7470	(0.0200)		1.4940	(-0.0040)	
Sample #4	0.7570	(0.0020)		1.4920	(-0.0200)	
Avg % Abs	0.7480	(0.0083)		1.4917	(-0.0120)	
STD DEV	0.0085	(0.0101)		0.0025	(0.0080)	
REL STD DEV	1.142	(121.392)		0.169	(66.667)	

Solution = 0.080 g/210L or 0.3810 mg/l, Samples = 4, Discarded = 1						
Sample	% Abs	(% Abs Ref)		% Abs	(% Abs Ref)	
Sample #1	1.4630	(0.0160)		2.8070	(0.0050)	
Sample #2	1.4960	(-0.0010)		2.8360	(-0.0060)	
Sample #3	1.4990	(0.0040)		2.8400	(-0.0060)	
Sample #4	1.4920	(0.0190)		2.8530	(-0.0080)	
Avg % Abs	1.4957	(0.0073)		2.8430	(-0.0067)	
STD DEV	0.0035	(0.0104)		0.0089	(0.0012)	
REL STD DEV	0.235	(141.932)		0.313	(17.321)	

Solution = 0.150 g/210L or 0.7143 mg/l, Samples = 4, Discarded = 1						
Sample	% Abs	(% Abs Ref)		% Abs	(% Abs Ref)	
Sample #1	2.6250	(0.0060)		4.9470	(0.0170)	
Sample #2	2.6280	(0.0270)		4.9890	(0.0190)	
Sample #3	2.6360	(0.0300)		5.0030	(0.0100)	
Sample #4	2.6770	(0.0130)		5.0160	(0.0070)	
Avg % Abs	2.6470	(0.0233)		5.0027	(0.0120)	
STD DEV	0.0263	(0.0091)		0.0135	(0.0062)	
REL STD DEV	0.993	(38.888)		0.270	(52.042)	

Solution = 0.300 g/210L or 1.4286 mg/l, Samples = 4, Discarded = 1						
Sample	% Abs	(% Abs Ref)		% Abs	(% Abs Ref)	
Sample #1	5.1230	(-0.0210)		9.4040	(-0.0060)	
Sample #2	5.1440	(-0.0080)		9.4390	(0.0010)	
Sample #3	5.1260	(-0.0050)		9.4520	(0.0130)	
Sample #4	5.1160	(0.0070)		9.4630	(0.0120)	
Avg % Abs	5.1287	(-0.0020)		9.4513	(0.0087)	
STD DEV	0.0142	(0.0079)		0.0120	(0.0067)	
REL STD DEV	0.277	(396.863)		0.127	(76.827)	

TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-007093
 06/07/2019 13:23:31

Auto Calibration

pg 2 of 2

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

 Zero Order Coef -92.57
 First Order Coef 2610.14
 Second Order Coef 38.04

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

 Zero Order Coef -217.72
 First Order Coef 1387.91
 Second Order Coef 15.56

Act (g/210L)	Fit (g/210L)	Residual (g/210L)
0.000	-0.000	0.0003
0.040	0.040	0.0005
0.080	0.082	-0.0018
0.150	0.149	0.0013
0.300	0.300	-0.0002

Act (g/210L)	Fit (g/210L)	Residual (g/210L)
0.000	-0.000	0.0001
0.040	0.040	0.0004
0.080	0.081	-0.0009
0.150	0.149	0.0006
0.300	0.300	-0.0001

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

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

Sample	3um	9um
Sample #1	4479.00	4241.00
Sample #2	4338.00	4149.00
Sample #3	4309.00	4108.00
Sample #4	4324.00	4106.00
Avg	4323.6665	4121.0000
STD DEV	14.5029	24.2693
REL STD DEV	0.335	0.589
H2O adjust (mg/l*10k)	438	640

Atmospheric Pressure = 941

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

TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-007093
 06/07/2019 13:23:31

Auto Calibration
 Max Power Res Value = 96
 Auto Range Res Value = 78

Charles E. Ee
 6.7.2019

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

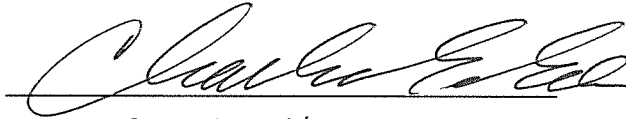
CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-007093
Location = TOXL 8164.16.00 09/18
06/07/2019 14:14

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	14:15
02 Std. Sol.	0.014	14:16
03 Room Air	0.000	14:16
04 Std. Sol.	0.013	14:17
05 Room Air	0.000	14:17
06 Std. Sol.	0.014	14:18
07 Room Air	0.000	14:19

08 Sim Temp = 34.0°C

Simul Ser No = DR5113
Std Sol No = 201805C
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks: 0.015 AC
Low AC

Form 106-I8000

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

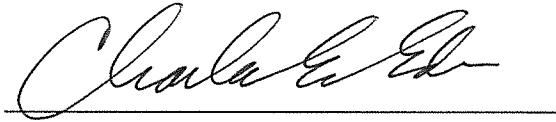
CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-007093
Location = TOXL 8164.16.00 09/18
06/07/2019 14:21

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	14:21
02 Std. Sol.	0.305	14:22
03 Room Air	0.000	14:23
04 Std. Sol.	0.305	14:23
05 Room Air	0.000	14:24
06 Std. Sol.	0.305	14:25
07 Room Air	0.000	14:25

08 Sim Temp = 34.0°C

Simul Ser No = DR7089
Std Sol No = 17350
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks:

H764 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 80-007093
Location = TOXL 8164.16.00 09/18
06/07/2019 14:27

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	14:28
02 Std. Gas	0.082	14:28
03 Room Air	0.000	14:29
04 Std. Gas	0.079	14:29
05 Room Air	0.000	14:29
06 Std. Gas	0.079	14:30
07 Room Air	0.000	14:30

Lot No = 34418080A2
Cyl No = 45
Exp Date = 02/05/2021
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks: CALIBRATION CHECK
0.080 AC

Form 106-I8000

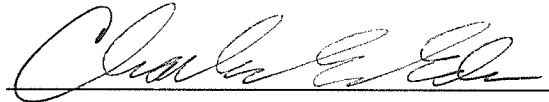
Intoxilyzer Test Record and Checklist
NDOAG Crime Lab. Div., Bismarck, ND 58501

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-007093
Location = TOXL 8164.16.00 09/18
06/07/2019 14:31

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	14:31
02 Std. Gas	0.081	14:32
03 Room Air	0.000	14:32
04 Std. Gas	0.079	14:33
05 Room Air	0.000	14:33
06 Std. Gas	0.079	14:33
07 Room Air	0.000	14:34

Lot No = 34418080A2
Cyl No = 45
Exp Date = 02/05/2021
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks: CALIBRATION CHECK
0.080 AC

Form 106-I8000

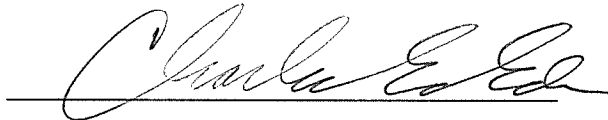
Intoxilyzer Test Record and Checklist
NDOAG Crime Lab. Div., Bismarck, ND 58501

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-007093
Location = TOXL 8164.16.00 09/18
06/07/2019 14:34

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	14:35
02 Std. Gas	0.081	14:35
03 Room Air	0.000	14:36
04 Std. Gas	0.080	14:36
05 Room Air	0.000	14:37
06 Std. Gas	0.079	14:37
07 Room Air	0.000	14:38

Lot No = 34418080A2
Cyl No = 45
Exp Date = 02/05/2021
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks: CALIBRATION CHECK
0.080 AC

Form 106-I8000