

INTOXILYZER® 8000 CALIBRATION ADJUSTMENT

Intoxilyzer® 8000 Serial Number: 80-005948 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 & 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. 175 L/S X 60 Sec/min = 10.50 L/min
 - b. 20 L/min: 0. 332 L/S X 60 Sec/min = 19.92 L/min
 - c. Flow Rates within ± 1 L/min of Expected Value
- B. Gas Tank Sensor Check (Level 3,D,G)
1. Display: 809 psi Regulator: 800 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	(ACTUAL) 0.000 (NOMINAL)	NA - MilliQ H ₂ O	NA - MilliQ H ₂ O	MP3064
2	0.040 (0.040)	201808D	8.22.20	MP3065
3	0.081 (0.080)	201807C	7.25.20	MP3066
4	0.151 (0.150)	201811E	11.26.20	MP3067
5	0.301 (0.300)	201803H	3.22.20	MP3069

3. 0.100 AC Calibration Gas for H₂O Adjustment
 - a. Lot No. 13518100A3 Cyl No. 6 Exp. Date: 8.5.20
4. Atmospheric Pressure
 - a. 952 mbar Displayed by Intoxilyzer® 8000
 - b. 954 mbar Adjusted to using barometer
 - c. 954 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>4333</u>	+	<u>428</u>	= <u>4761</u>
9 μm	<u>4443</u>	+	<u>318</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: 0.010 AC
Sim. SN: MP5289 Lot No.: 2018058 Exp. Date: 5.30.20
- ii. High AC Known Value ≥ 0.25 AC: 0.250 AC
Sim. SN: MP5321 Lot No.: 2018036 Exp. Date: 3.22.20

- b. Dry Calibration Check: Known Value 0.08 AC

Lot No. 34418080A2 Cyl No. 12 Exp. Date: 2/5/21

Test 1 <u>0.080</u> AC	Test 4 <u>0.080</u> AC	Test 7 <u>0.079</u> AC
Test 2 <u>0.079</u> AC	Test 5 <u>0.079</u> AC	Test 8 <u>0.079</u> AC
Test 3 <u>0.079</u> AC	Test 6 <u>0.080</u> AC	Test 9 <u>0.080</u> AC

Average 0.079 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 AS PART OF A PROFICIENCY TEST.

Instrument is acceptable to be used in the field.

Charles E. Ed

Breath Analyst Signature

9/13/19

Date

NA

NA

Reviewed by

Date

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

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-005948
Location = TOXL 8164.14.00 09/16
09/12/2019 14:35

Flow Rate Calibration*****

1: Rate (Liters/min) = 5
 SQRT(Diff)) = 0.000
2: Rate (Liters/min) = 15
 SQRT(Diff)) = 10.047
3: Rate (Liters/min) = 30
 SQRT(Diff)) = 21.211

Dependent Data Scale Factor = 100000 L/min

Independent Data Scale Factor = 256

Rounded Slope = 462

Rounded Intercept = 435439

Correlation = 0.99643



TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-005948
 09/12/2019 15:40:07

Auto Calibration

<<<<< 3um >>>>>			<<<<< 9um >>>>>		
Sample	% Abs	(% Abs Ref)	Sample	% Abs	(% Abs Ref)
Solution = 0.000 g/210L or 0.0000 mg/l, Samples = 4, Discarded = 1					
Sample #1	0.0640	(0.0150)	Sample #1	0.1260	(-0.0150)
Sample #2	0.0840	(0.0390)	Sample #2	0.1270	(-0.0030)
Sample #3	0.0710	(0.0710)	Sample #3	0.1090	(0.0070)
Sample #4	0.0560	(0.0940)	Sample #4	0.1260	(0.0110)
Avg % Abs	0.0703	(0.0680)	Avg % Abs	0.1207	(0.0050)
STD DEV	0.0140	(0.0276)	STD DEV	0.0101	(0.0072)
REL STD DEV	19.922	(40.621)	REL STD DEV	8.383	(144.222)
Solution = 0.040 g/210L or 0.1905 mg/l, Samples = 4, Discarded = 1					
Sample #1	0.7910	(-0.0190)	Sample #1	1.4870	(-0.0070)
Sample #2	0.7370	(0.0220)	Sample #2	1.4820	(0.0030)
Sample #3	0.7620	(0.0050)	Sample #3	1.4950	(0.0010)
Sample #4	0.7530	(0.0060)	Sample #4	1.5240	(-0.0130)
Avg % Abs	0.7507	(0.0110)	Avg % Abs	1.5003	(-0.0030)
STD DEV	0.0127	(0.0095)	STD DEV	0.0215	(0.0087)
REL STD DEV	1.687	(86.722)	REL STD DEV	1.433	(290.593)
Solution = 0.081 g/210L or 0.3857 mg/l, Samples = 4, Discarded = 1					
Sample #1	1.4560	(0.0070)	Sample #1	2.8490	(0.0080)
Sample #2	1.4640	(0.0120)	Sample #2	2.8430	(0.0130)
Sample #3	1.4290	(0.0500)	Sample #3	2.8380	(0.0320)
Sample #4	1.4350	(0.0440)	Sample #4	2.8380	(0.0320)
Avg % Abs	1.4427	(0.0353)	Avg % Abs	2.8397	(0.0257)
STD DEV	0.0187	(0.0204)	STD DEV	0.0029	(0.0110)
REL STD DEV	1.297	(57.817)	REL STD DEV	0.102	(42.739)
Solution = 0.151 g/210L or 0.7190 mg/l, Samples = 4, Discarded = 1					
Sample #1	2.6210	(0.0140)	Sample #1	5.1380	(-0.0010)
Sample #2	2.5970	(0.0380)	Sample #2	5.1340	(0.0150)
Sample #3	2.6350	(0.0310)	Sample #3	5.1260	(0.0230)
Sample #4	2.6460	(0.0200)	Sample #4	5.1350	(0.0290)
Avg % Abs	2.6260	(0.0297)	Avg % Abs	5.1317	(0.0223)
STD DEV	0.0257	(0.0091)	STD DEV	0.0049	(0.0070)
REL STD DEV	0.979	(30.586)	REL STD DEV	0.096	(31.450)
Solution = 0.301 g/210L or 1.4333 mg/l, Samples = 4, Discarded = 1					
Sample #1	5.0430	(0.0000)	Sample #1	9.7090	(0.0310)
Sample #2	5.0610	(0.0200)	Sample #2	9.7340	(0.0510)
Sample #3	5.0530	(0.0140)	Sample #3	9.7400	(0.0380)
Sample #4	5.0590	(0.0300)	Sample #4	9.7510	(0.0470)
Avg % Abs	5.0577	(0.0213)	Avg % Abs	9.7417	(0.0453)
STD DEV	0.0042	(0.0081)	STD DEV	0.0086	(0.0067)
REL STD DEV	0.082	(37.889)	REL STD DEV	0.089	(14.687)

TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-005948
 09/12/2019 15:40:07

Auto Calibration

pg 2 of 2

<<<<< 3um >>>>>			<<<<< 9um >>>>>		
Zero Order Coef	-183.42		Zero Order Coef	-170.09	
First Order Coef	2755.62		First Order Coef	1377.85	
Second Order Coef	22.53		Second Order Coef	11.37	
Act (g/210L)	Fit (g/210L)	Residual (g/210L)	Act (g/210L)	Fit (g/210L)	Residual (g/210L)
0.000	0.000	-0.0002	0.000	-0.000	0.0001
0.040	0.040	0.0001	0.040	0.040	-0.0004
0.081	0.081	0.0004	0.081	0.081	0.0005
0.151	0.151	-0.0004	0.151	0.151	-0.0002
0.301	0.301	0.0001	0.301	0.301	0.0000

<<<<< 3um >>>>>		<<<<< 9um >>>>>	
Solution = 0.100 g/210L or 0.4762 mg/l, Samples = 4, Discarded = 1			
Sample #1	4247.00	4408.00	
Sample #2	4300.00	4433.00	
Sample #3	4352.00	4442.00	
Sample #4	4348.00	4456.00	
Avg	4333.3335	4443.6665	
STD DEV	28.9367	11.5902	
REL STD DEV	0.668	0.261	
H2O adjust (mg/l*10k)	428	318	

Atmospheric Pressure = 954

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



TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-005948
 09/12/2019 15:40:07

Auto Calibration
 Max Power Res Value = 17
 Auto Range Res Value = 6

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

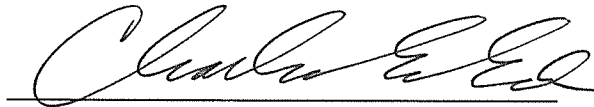
CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-005948
Location = TOXL 8164.14.00 09/16
09/12/2019 16:41

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	16:41
02 Std. Sol.	0.012	16:42
03 Room Air	0.000	16:42
04 Std. Sol.	0.012	16:43
05 Room Air	0.000	16:44
06 Std. Sol.	0.011	16:44
07 Room Air	0.000	16:45

08 Sim Temp = 34.0°C

Simul Ser No = MP5289
Std Sol No = 201805B
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks:

Low AC
0.010 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 80-005948
Location = TOXL 8164.14.00 09/16
09/12/2019 16:47

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	16:48
02 Std. Sol.	0.253	16:48
03 Room Air	0.000	16:49
04 Std. Sol.	0.252	16:50
05 Room Air	0.000	16:50
06 Std. Sol.	0.253	16:51
07 Room Air	0.000	16:51

08 Sim Temp = 34.0°C

Simul Ser No = MP5321

Std Sol No = 201803G

County = 08

Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks:

HIGH AC
0.250 AC

Form 106-I8000

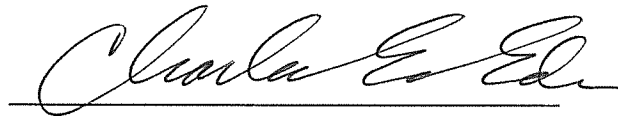
Intoxilyzer Test Record and Checklist
NDOAG Crime Lab. Div., Bismarck, ND 58501

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-005948
Location = TOXL 8164.14.00 09/16
09/12/2019 16:53

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	16:54
02 Std. Gas	0.080	16:54
03 Room Air	0.000	16:55
04 Std. Gas	0.079	16:55
05 Room Air	0.000	16:55
06 Std. Gas	0.079	16:56
07 Room Air	0.000	16:56

Lot No = 34418080A2
Cyl No = 12
Exp Date = 02/05/2021
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks: *DRY CAL 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 80-005948
Location = TOXL 8164.14.00 09/16
09/12/2019 16:57

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	16:57
02 Std. Gas	0.080	16:57
03 Room Air	0.000	16:58
04 Std. Gas	0.079	16:58
05 Room Air	0.000	16:59
06 Std. Gas	0.080	16:59
07 Room Air	0.000	17:00

Lot No = 34418080A2
Cyl No = 12
Exp Date = 02/05/2021
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks: DRY CAL. 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 80-005948
Location = TOXL 8164.14.00 09/16
09/13/2019 10:52

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	10:52
02 Std. Gas	0.079	10:53
03 Room Air	0.000	10:53
04 Std. Gas	0.079	10:54
05 Room Air	0.000	10:54
06 Std. Gas	0.080	10:55
07 Room Air	0.000	10:55

Lot No = 34418080A2
Cyl No = 12
Exp Date = 02/05/2021
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks: DRY CAL CHECK
 0.080 AC

Form 106-I8000