

INTOXILYZER® 8000 CALIBRATION ADJUSTMENT

Intoxilyzer® 8000 Serial Number: 80-002669 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: 55260 & 40655
 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: $0.175 \text{ L/S} \times 60 \text{ Sec/min} = 10.50 \text{ L/min}$
 - b. 20 L/min: $0.332 \text{ L/S} \times 60 \text{ Sec/min} = 19.92 \text{ L/min}$
 - c. Flow Rates within $\pm 1 \text{ L/min}$ of Expected Value

- B. Gas Tank Sensor Check (Level 3,D,G)
1. Display: 968 psi Regulator: 975 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	MP3057
2	0.040 (0.041)	202003A	3.10.22	MP3059
3	0.080 (0.080)	21050	2.15.23	MP531B
4	0.100 (0.102)	202010E	10.20.22	MP3003
5	0.300 (0.298)	20030	1.21.22	MP3069

3. 0.100 AC Calibration Gas for H₂O Adjustment
 - a. Lot No. 07220100A1 Cyl No. 4 Exp. Date: 5/5/22
4. Atmospheric Pressure
 - a. 959 mbar Displayed by Intoxilyzer® 8000
 - b. 960 mbar Adjusted to using barometer
 - c. 958 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	4282	+	479	= 4761
9 μ m	4505	+	256	= 4761

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: MP3069 Lot No.: 20070 Exp. Date: 2.13.22
 - ii. High AC Known Value \geq 0.25 AC: 0.300 AC
 Sim. SN: MP5317 Lot No.: 202012A Exp. Date: 12.8.22
 - b. Dry Calibration Check: Known Value 0.08 AC
 Lot No. 24119080A1 Cyl No. 5 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 0.081 AC Test 6 0.081 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: CAL. ADJ. DUE TO 0.080 AC ^{GAS} STD. READING 0.084 AC DURING TESTING. STILL WITHIN TOLERANCE, BUT HIGH.

Instrument is acceptable to be used in the field.

Charles E. Egan
 Breath Analyst Signature

6/14/21
 Date
 CEE

Kari L. Dietz
 Reviewed by

6-15-21
 Date

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

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-002669
Location = TOXL 8164.14.00 09/16
06/14/2021 15:10

Flow Rate Calibration*****

1: Rate (Liters/min) = 5

 SQRT(Diff) = 6.164

2: Rate (Liters/min) = 15

 SQRT(Diff) = 12.000

3: Rate (Liters/min) = 30

 SQRT(Diff) = 21.930


Dependent Data Scale Factor = 100000 L/min

Independent Data Scale Factor = 256

Rounded Slope = 616

Rounded Intercept = -441889

Correlation = 0.99943



TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-002669
 06/14/2021 16:38:51

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Auto Calibration

	<<<<< 3um >>>>>		<<<<< 9um >>>>>	
	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)

Solution = 0.000 g/210L or 0.0000 mg/l, Samples = 4, Discarded = 1				
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)
Sample #1	0.0700	(-0.0060)	0.0810	(-0.0020)
Sample #2	0.1240	(0.0000)	0.1210	(-0.0210)
Sample #3	0.1180	(0.0140)	0.1160	(0.0000)
Sample #4	0.0630	(0.0450)	0.0920	(0.0000)
Avg % Abs	0.1017	(0.0197)	0.1097	(-0.0070)
STD DEV	0.0336	(0.0230)	0.0155	(0.0121)
REL STD DEV	33.069	(117.096)	14.136	(173.205)

Solution = 0.041 g/210L or 0.1952 mg/l, Samples = 4, Discarded = 1				
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)
Sample #1	0.8090	(-0.0240)	1.4990	(-0.0120)
Sample #2	0.8100	(-0.0090)	1.4930	(0.0150)
Sample #3	0.7650	(0.0120)	1.4770	(0.0130)
Sample #4	0.7790	(-0.0020)	1.4960	(0.0040)
Avg % Abs	0.7847	(0.0003)	1.4887	(0.0107)
STD DEV	0.0230	(0.0107)	0.0102	(0.0059)
REL STD DEV	2.935	(3207.802)	0.686	(54.932)

Solution = 0.080 g/210L or 0.3810 mg/l, Samples = 4, Discarded = 1				
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)
Sample #1	1.4440	(-0.0190)	2.7420	(-0.0110)
Sample #2	1.4720	(-0.0150)	2.7770	(0.0000)
Sample #3	1.4240	(0.0070)	2.7640	(-0.0020)
Sample #4	1.4740	(-0.0040)	2.7740	(0.0000)
Avg % Abs	1.4567	(-0.0040)	2.7717	(-0.0007)
STD DEV	0.0283	(0.0110)	0.0068	(0.0012)
REL STD DEV	1.943	(275.000)	0.246	(173.205)

Solution = 0.102 g/210L or 0.4857 mg/l, Samples = 4, Discarded = 1				
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)
Sample #1	1.7940	(-0.0130)	3.4490	(-0.0040)
Sample #2	1.8180	(0.0100)	3.5110	(0.0060)
Sample #3	1.8140	(0.0140)	3.4950	(0.0070)
Sample #4	1.8500	(-0.0060)	3.5360	(-0.0080)
Avg % Abs	1.8273	(0.0060)	3.5140	(0.0017)
STD DEV	0.0197	(0.0106)	0.0207	(0.0084)
REL STD DEV	1.080	(176.383)	0.588	(503.190)

Solution = 0.298 g/210L or 1.4190 mg/l, Samples = 4, Discarded = 1				
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)
Sample #1	4.9960	(0.0000)	9.5310	(-0.0120)
Sample #2	5.1320	(-0.0120)	9.6680	(0.0040)
Sample #3	5.0910	(0.0140)	9.6740	(0.0080)
Sample #4	5.1350	(-0.0020)	9.6800	(0.0080)
Avg % Abs	5.1193	(0.0000)	9.6740	(0.0067)
STD DEV	0.0246	(0.0131)	0.0060	(0.0023)
REL STD DEV	0.480	(0.000)	0.062	(34.641)

TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-002669
 06/14/2021 16:38:51

Auto Calibration

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<<<< 3um >>>>

<<<< 9um >>>>

 Zero Order Coef -273.64
 First Order Coef 2802.50
 Second Order Coef 4.44

 -150.40
 1398.95
 8.62

Act (g/210L)	Fit (g/210L)	Residual (g/210L)
0.000	0.000	-0.0002
0.041	0.040	0.0005
0.080	0.080	-0.0002
0.102	0.102	-0.0001
0.298	0.298	0.0000

Act (g/210L)	Fit (g/210L)	Residual (g/210L)
0.000	0.000	-0.0001
0.041	0.041	0.0000
0.080	0.080	0.0003
0.102	0.102	-0.0003
0.298	0.298	0.0000

<<<< 3um >>>>

<<<< 9um >>>>

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

Sample #1	4288.00	4526.00
Sample #2	4249.00	4512.00
Sample #3	4256.00	4480.00
Sample #4	4342.00	4523.00
Avg	4282.3335	4505.0000
STD DEV	51.7912	22.3383
REL STD DEV	1.209	0.496
H2O adjust (mg/l*10k)	479	256

Atmospheric Pressure = 958

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

TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-002669
 06/14/2021 16:38:51

Auto Calibration
 Max Power Res Value = 36
 Auto Range Res Value = 28

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

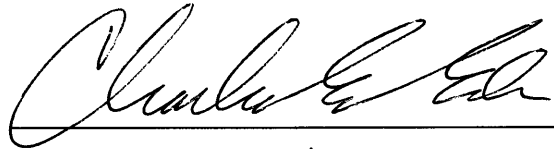
CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-002669
Location = TOXL 8164.14.00 09/16
06/15/2021 09:34

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	09:35
02 Std. Sol.	0.019	09:36
03 Room Air	0.000	09:36
04 Std. Sol.	0.020	09:37
05 Room Air	0.000	09:37
06 Std. Sol.	0.019	09:38
07 Room Air	0.000	09:38

08 Sim Temp = 34.0°C

Simul Ser No = MP3064
Std Sol No = 20070
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 80-002669
Location = TOXL 8164.14.00 09/16
06/15/2021 09:45

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	09:46
02 Std. Sol.	0.294	09:47
03 Room Air	0.000	09:47
04 Std. Sol.	0.295	09:48
05 Room Air	0.000	09:49
06 Std. Sol.	0.295	09:49
07 Room Air	0.000	09:50

08 Sim Temp = 34.0°C

Simul Ser No = MP5317
Std Sol No = 202012A
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks: HIGH AC
 0.300 AC

Form 106-I8000

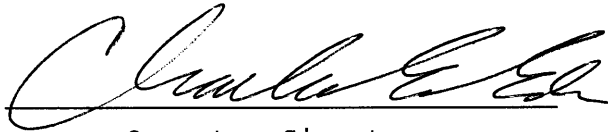
Intoxilyzer Test Record and Checklist
NDOAG Crime Lab. Div., Bismarck, ND 58501

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-002669
Location = TOXL 8164.14.00 09/16
06/15/2021 09:51

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	09:52
02 Std. Gas	0.080	09:52
03 Room Air	0.000	09:53
04 Std. Gas	0.079	09:53
05 Room Air	0.000	09:54
06 Std. Gas	0.081	09:54
07 Room Air	0.000	09:55

Lot No = 24119080A1
Cyl No = 5
Exp Date = 11/05/2021
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks: CALIBRATION CHECK
0.080AC

Form 106-I8000

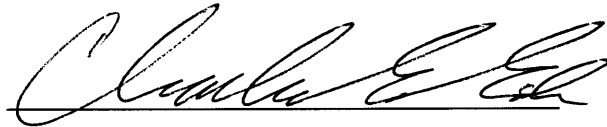
Intoxilyzer Test Record and Checklist
NDOAG Crime Lab. Div., Bismarck, ND 58501

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-002669
Location = TOXL 8164.14.00 09/16
06/15/2021 09:55

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	09:55
02 Std. Gas	0.080	09:56
03 Room Air	0.000	09:56
04 Std. Gas	0.080	09:57
05 Room Air	0.000	09:57
06 Std. Gas	0.081	09:57
07 Room Air	0.000	09:58

Lot No = 24119080A1
Cyl No = 5
Exp Date = 11/05/2021
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks: CALIBRATION CHECK
0.080 AC
Form 106-I8000

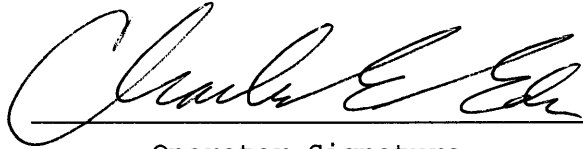
Intoxilyzer Test Record and Checklist
NDOAG Crime Lab. Div., Bismarck, ND 58501

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-002669
Location = TOXL 8164.14.00 09/16
06/15/2021 09:58

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	09:59
02 Std. Gas	0.080	09:59
03 Room Air	0.000	10:00
04 Std. Gas	0.079	10:00
05 Room Air	0.000	10:01
06 Std. Gas	0.080	10:01
07 Room Air	0.000	10:01

Lot No = 24119080A1
Cyl No = 5
Exp Date = 11/05/2021
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks: CALIBRATION CHECK
0.080 AC

Form 106-I8000