

INTOXILYZER® 8000 CALIBRATION ADJUSTMENT

Intoxilyzer® 8000 Serial Number: 80-005946

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: 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  $\geq 0.99000$
  5.  Flow Sensor Calibration Verification (Level 3,D,F)
    - a. 10 L/min: 0. 171 L/S X 60 Sec/min = 10.26 L/min
    - b. 20 L/min: 0. 324 L/S X 60 Sec/min = 19.44 L/min
    - c.  Flow Rates within  $\pm 1$  L/min of Expected Value
- B. Gas Tank Sensor Check (Level 3,D,G)
1. Display: 950 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  $\geq 10$
    - 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	Nom. 0.000 (ACTUAL)	NA - MilliQ H <sub>2</sub> O	NA - MilliQ H <sub>2</sub> O	MP3057
2	0.040 (0.041)	202003A	3.10.22	MP3059
3	0.080 (0.080)	21050	2.15.23	MP5318
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 H<sub>2</sub>O Adjustment
  - a. Lot No. 07220100A1 Cyl No. 4 Exp. Date: 5.5.22
4. Atmospheric Pressure
  - a. 952 mbar Displayed by Intoxilyzer® 8000
  - b. 952 mbar Adjusted to using barometer
  - c. 952 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  $\mu$ m and 9  $\mu$ m channels
- d.  Dry Gas H2O Adjustment Sum for 3  $\mu$ m and 9  $\mu$ m channels within  $\pm$  10

	Average	+ H2O Adjust	=	
3 $\mu$ m	<u>4265</u>	<u>496</u>	=	<u>4761</u>
9 $\mu$ m	<u>4357</u>	<u>404</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: 0.030 AC  
 Sim. SN: MP5289 Lot No.: 201911E Exp. Date: 11.19.21
- ii. High AC Known Value  $\geq$  0.25 AC: 0.400 AC  
 Sim. SN: MP3062 Lot No.: 202103E Exp. Date: 3.24.23
- b. Dry Calibration Check: Known Value 0.08 AC  
 Lot No. 05620080A1 Cyl No. 6 Exp. Date: 4.5.22
- 0.081 Test 1 0.080 AC Test 4 0.080 AC Test 7 0.080 AC  
 Test 2 0.080 AC Test 5 0.081 AC Test 8 0.080 AC  
 Test 3 0.081 AC Test 6 0.080 AC Test 9 0.081 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. ADJUST DUE TO LOW AC STD  
OF 0.030 AC READING 0.026 AC DURING TESTING. STILL  
WITHIN TOLERANCE OF  $\pm$  0.005 AC OR  $\pm$  5% WHICHEVER  
IS GREATER.

Instrument is acceptable to be used in the field.

Charles Eder  
 Breath Analyst Signature

6/2/21  
 Date

Kali Z. Dieb  
 Reviewed by

6-7-21  
 Date

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

CMI, Inc. Intoxilyzer            Alcohol Analyzer  
North Dakota Model 8000            SN 80-005946  
Location = TOXL                    8164.14.00 09/16  
06/02/2021                            10:22

Flow Rate Calibration\*\*\*\*\*

1: Rate (Liters/min) = 5

   SQRT(Diff)) = 6.855

2: Rate (Liters/min) = 15

   SQRT(Diff)) = 12.527

3: Rate (Liters/min) = 30

   SQRT(Diff)) = 22.000

Dependent Data Scale Factor = 100000 L/min

Independent Data Scale Factor = 256

Rounded Slope = 642

Rounded Intercept = -600927

Correlation = 0.99958



TOXL  
 Intoxilyzer - Alcohol Analyzer  
 Model 8000 SN 80-005946  
 06/02/2021 10:27:09

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)		% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		
Sample #1	0.1390	(-0.0200)		0.1850	(-0.0100)		0.1850	(-0.0100)		0.1850	(-0.0100)		
Sample #2	0.1000	(0.0560)		0.1500	(0.0120)		0.1500	(0.0120)		0.1500	(0.0120)		
Sample #3	0.0630	(0.1280)		0.1330	(0.0390)		0.1330	(0.0390)		0.1330	(0.0390)		
Sample #4	0.0660	(0.1640)		0.1410	(0.0390)		0.1410	(0.0390)		0.1410	(0.0390)		
Avg % Abs	0.0763	(0.1160)		0.1413	(0.0300)		0.1413	(0.0300)		0.1413	(0.0300)		
STD DEV	0.0206	(0.0550)		0.0085	(0.0156)		0.0085	(0.0156)		0.0085	(0.0156)		
REL STD DEV	26.922	(47.406)		6.018	(51.962)		6.018	(51.962)		6.018	(51.962)		
-----													
Solution = 0.041 g/210L or 0.1952 mg/l, Samples = 4, Discarded = 1													
Sample	% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		
Sample #1	0.7620	(-0.0210)		1.5080	(-0.0140)		1.5080	(-0.0140)		1.5080	(-0.0140)		
Sample #2	0.7250	(0.0240)		1.4230	(0.0500)		1.4230	(0.0500)		1.4230	(0.0500)		
Sample #3	0.7310	(0.0280)		1.4290	(0.0520)		1.4290	(0.0520)		1.4290	(0.0520)		
Sample #4	0.7150	(0.0340)		1.4390	(0.0470)		1.4390	(0.0470)		1.4390	(0.0470)		
Avg % Abs	0.7237	(0.0287)		1.4303	(0.0497)		1.4303	(0.0497)		1.4303	(0.0497)		
STD DEV	0.0081	(0.0050)		0.0081	(0.0025)		0.0081	(0.0025)		0.0081	(0.0025)		
REL STD DEV	1.117	(17.558)		0.565	(5.067)		0.565	(5.067)		0.565	(5.067)		
-----													
Solution = 0.080 g/210L or 0.3810 mg/l, Samples = 4, Discarded = 1													
Sample	% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		
Sample #1	1.4260	(-0.0120)		2.8520	(0.0080)		2.8520	(0.0080)		2.8520	(0.0080)		
Sample #2	1.3950	(0.0090)		2.8030	(0.0390)		2.8030	(0.0390)		2.8030	(0.0390)		
Sample #3	1.4040	(0.0240)		2.8000	(0.0470)		2.8000	(0.0470)		2.8000	(0.0470)		
Sample #4	1.3610	(0.0510)		2.7650	(0.0620)		2.7650	(0.0620)		2.7650	(0.0620)		
Avg % Abs	1.3867	(0.0280)		2.7893	(0.0493)		2.7893	(0.0493)		2.7893	(0.0493)		
STD DEV	0.0227	(0.0213)		0.0211	(0.0117)		0.0211	(0.0117)		0.0211	(0.0117)		
REL STD DEV	1.636	(76.014)		0.757	(23.668)		0.757	(23.668)		0.757	(23.668)		
-----													
Solution = 0.102 g/210L or 0.4857 mg/l, Samples = 4, Discarded = 1													
Sample	% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		
Sample #1	1.7680	(-0.0200)		3.5550	(-0.0220)		3.5550	(-0.0220)		3.5550	(-0.0220)		
Sample #2	1.7280	(0.0120)		3.4680	(0.0260)		3.4680	(0.0260)		3.4680	(0.0260)		
Sample #3	1.7470	(0.0330)		3.4960	(0.0290)		3.4960	(0.0290)		3.4960	(0.0290)		
Sample #4	1.7170	(0.0390)		3.4740	(0.0440)		3.4740	(0.0440)		3.4740	(0.0440)		
Avg % Abs	1.7307	(0.0280)		3.4793	(0.0330)		3.4793	(0.0330)		3.4793	(0.0330)		
STD DEV	0.0152	(0.0142)		0.0147	(0.0096)		0.0147	(0.0096)		0.0147	(0.0096)		
REL STD DEV	0.877	(50.634)		0.424	(29.223)		0.424	(29.223)		0.424	(29.223)		
-----													
Solution = 0.298 g/210L or 1.4190 mg/l, Samples = 4, Discarded = 1													
Sample	% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		
Sample #1	4.8750	(0.0020)		9.6210	(-0.0120)		9.6210	(-0.0120)		9.6210	(-0.0120)		
Sample #2	4.8840	(0.0300)		9.5600	(0.0640)		9.5600	(0.0640)		9.5600	(0.0640)		
Sample #3	4.8550	(0.0380)		9.5720	(0.0600)		9.5720	(0.0600)		9.5720	(0.0600)		
Sample #4	4.8950	(0.0380)		9.5660	(0.0810)		9.5660	(0.0810)		9.5660	(0.0810)		
Avg % Abs	4.8780	(0.0353)		9.5660	(0.0683)		9.5660	(0.0683)		9.5660	(0.0683)		
STD DEV	0.0207	(0.0046)		0.0060	(0.0112)		0.0060	(0.0112)		0.0060	(0.0112)		
REL STD DEV	0.424	(13.072)		0.063	(16.318)		0.063	(16.318)		0.063	(16.318)		
-----													

TOXL  
 Intoxilyzer - Alcohol Analyzer  
 Model 8000 SN 80-005946  
 06/02/2021 10:27:09

Auto Calibration

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<<<<< 3um >>>>>  
 -----  
 Zero Order Coef -201.65  
 First Order Coef 2903.71  
 Second Order Coef 9.53  
 -----

<<<<< 9um >>>>>  
 -----  
 Zero Order Coef -164.83  
 First Order Coef 1413.30  
 Second Order Coef 9.10  
 -----

Act (g/210L)	Fit (g/210L)	Residual (g/210L)
0.000	0.000	-0.0004
0.041	0.040	0.0010
0.080	0.081	-0.0007
0.102	0.102	0.0001
0.298	0.298	0.0000

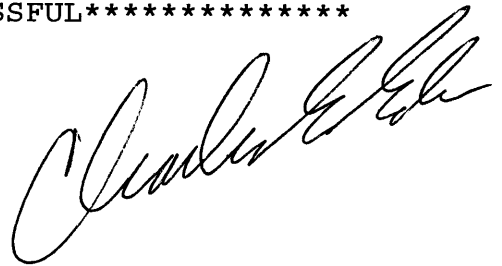
Act (g/210L)	Fit (g/210L)	Residual (g/210L)
0.000	0.001	-0.0007
0.041	0.039	0.0016
0.080	0.081	-0.0008
0.102	0.102	-0.0001
0.298	0.298	0.0001

<<<<< 3um >>>>> <<<<< 9um >>>>>  
 -----  
 Solution = 0.100 g/210L or 0.4762 mg/l, Samples = 4, Discarded = 1

Sample	3um	9um
Sample #1	4366.00	4509.00
Sample #2	4336.00	4342.00
Sample #3	4256.00	4340.00
Sample #4	4205.00	4389.00
Avg	4265.6665	4357.0000
STD DEV	66.0328	27.7308
REL STD DEV	1.548	0.636
H2O adjust (mg/l*10k)	496	404

Atmospheric Pressure = 952

\*\*\*\*\*CALIBRATION SUCCESSFUL\*\*\*\*\*



TOXL  
 Intoxilyzer - Alcohol Analyzer  
 Model: 8000 SN 80-005946  
 06/02/2021 10:27:09

Auto Calibration  
 Max Power Res Value = 18  
 Auto Range Res Value = 4

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

CMI, Inc. Intoxilyzer      Alcohol Analyzer  
North Dakota Model 8000      SN 80-005946  
Location = TOXL      8164.14.00 09/16  
06/02/2021      11:09

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	11:09
02 Std. Sol.	0.031	11:10
03 Room Air	0.000	11:10
04 Std. Sol.	0.031	11:11
05 Room Air	0.000	11:12
06 Std. Sol.	0.032	11:12
07 Room Air	0.000	11:13

08 Sim Temp = 34.0°C

Simul Ser No = MP5289  
Std Sol No = 201911E  
County = 08      Oper No. = 666666



Operator Signature  
CHARLES EDER

Remarks: *Low AC*  
*0.030 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 80-005946  
Location = TOXL      8164.14.00 09/16  
06/02/2021      11:14

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	11:14
02 Std. Sol.	0.396	11:15
03 Room Air	0.000	11:16
04 Std. Sol.	0.397	11:17
05 Room Air	0.000	11:17
06 Std. Sol.	0.398	11:18
07 Room Air	0.000	11:18

08 Sim Temp = 34.0°C

Simul Ser No = MP3062  
Std Sol No = 202103E  
County = 08      Oper No. = 666666



Operator Signature  
CHARLES EDER

Remarks: *HIGH AC*  
*0.400 AC*  
Form 106-I8000

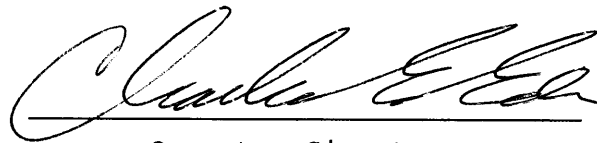
Intoxilyzer Test Record and Checklist  
NDOAG Crime Lab. Div., Bismarck, ND 58501

CMI, Inc. Intoxilyzer      Alcohol Analyzer  
North Dakota Model 8000      SN 80-005946  
Location = TOXL      8164.14.00 09/16  
06/02/2021      11:19

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	11:20
02 Std. Gas	0.081	11:20
03 Room Air	0.000	11:20
04 Std. Gas	0.080	11:21
05 Room Air	0.000	11:21
06 Std. Gas	0.081	11:22
07 Room Air	0.000	11:22

Lot No = 05620080A1  
Cyl No = 6  
Exp Date = 04/05/2022  
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 80-005946  
Location = TOXL      8164.14.00 09/16  
06/02/2021      11:22

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	11:23
02 Std. Gas	0.080	11:23
03 Room Air	0.000	11:24
04 Std. Gas	0.081	11:24
05 Room Air	0.000	11:25
06 Std. Gas	0.080	11:25
07 Room Air	0.000	11:26

Lot No = 05620080A1  
Cyl No = 6  
Exp Date = 04/05/2022  
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 80-005946  
Location = TOXL      8164.14.00 09/16  
06/02/2021      11:26

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	11:26
02 Std. Gas	0.080	11:27
03 Room Air	0.000	11:27
04 Std. Gas	0.080	11:28
05 Room Air	0.000	11:28
06 Std. Gas	0.081	11:29
07 Room Air	0.000	11:29

Lot No = 05620080A1  
Cyl No = 6  
Exp Date = 04/05/2022  
County = 08      Oper No. = 666666



Operator Signature  
CHARLES EDER

Remarks:

*CALIBRATION CHECK*  
*0.080 AC*

Form 106-I8000