

**INTOXILYZER® 8000 CALIBRATION ADJUSTMENT**

Intoxilyzer® 8000 Serial Number: 80-006490 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  $\geq 0.99000$
  5.  Flow Sensor Calibration Verification (Level 3,D,F)
    - a. 10 L/min: 0. 168 L/S X 60 Sec/min = 10.08 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: 323 psi Regulator: 325 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 (ACTUAL)	NA - MilliQ H <sub>2</sub> O	NA - MilliQ H <sub>2</sub> O	DR7111
2	0.040 (0.040)	20060	2-10-22	DR7351
3	0.080 (0.080)	19100	3-26-21	DR7345
4	<del>0.150</del> 0.150 (0.150)	20150	3-16-22	DR7344
5	0.300 (0.298)	19010	1-3-21	DR5190

3. 0.100 AC Calibration Gas for H<sub>2</sub>O Adjustment
  - a. Lot No. 07220100A1 Cyl No. 9 Exp. Date: 5/5/22
4. Atmospheric Pressure
  - a. 957 mbar Displayed by Intoxilyzer® 8000
  - b. 958 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  $\mu$ 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		H <sub>2</sub> O Adjust		=	
3 $\mu$ m	<u>4301</u>	+	<u>460</u>		=	<u>4761</u>
9 $\mu$ m	<u>4452</u>	+	<u>309</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: MP5321 Lot No.: 201810D Exp. Date: 10.24.20
- ii. High AC Known Value  $\geq$  0.25 AC: 0.300 AC  
 Sim. SN: MP3069 Lot No.: 201902D Exp. Date: 2.20.21
- b.  Dry Calibration Check: Known Value 0.08 AC  
 Lot No. 34418080A2 Cyl No. 7 Exp. Date: 2.5.21  
 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 0.079 AC Test 9 0.079 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 PROFICIENCY TEST.

Instrument is acceptable to be used in the field.

  
 Breath Analyst Signature

9.4.20  
 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 80-006490  
Location = TOXL                 8164.14.00 09/16  
09/04/2020                        14:46

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

1: Rate (Liters/min) = 5

   SQRT(Diff)) = 6.926

2: Rate (Liters/min) = 15

   SQRT(Diff)) = 12.164

3: Rate (Liters/min) = 30

   SQRT(Diff)) = 21.840

Dependent Data Scale Factor = 100000 L/min

Independent Data Scale Factor = 256

Rounded Slope = 649

Rounded Intercept = -598817

Correlation = 0.99848



TOXL  
 Intoxilyzer - Alcohol Analyzer  
 Model 8000 SN 80-006490  
 09/04/2020 14:54:19

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	0.0860	(-0.0070)		0.1140	(-0.0020)		0.1140	(-0.0020)		0.1140	(-0.0020)		
Sample #2	0.0870	(0.0320)		0.1070	(0.0000)		0.1070	(0.0000)		0.1070	(0.0000)		
Sample #3	0.1300	(0.0210)		0.1260	(0.0040)		0.1260	(0.0040)		0.1260	(0.0040)		
Sample #4	0.0690	(0.0580)		0.1100	(0.0180)		0.1100	(0.0180)		0.1100	(0.0180)		
Avg % Abs	0.0953	(0.0370)		0.1143	(0.0073)		0.1143	(0.0073)		0.1143	(0.0073)		
STD DEV	0.0313	(0.0190)		0.0102	(0.0095)		0.0102	(0.0095)		0.0102	(0.0095)		
REL STD DEV	32.876	(51.351)		8.934	(128.886)		8.934	(128.886)		8.934	(128.886)		
-----													
Solution = 0.040 g/210L or 0.1905 mg/l, Samples = 4, Discarded = 1													
Sample	% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		
Sample #1	0.8070	(-0.0010)		1.5350	(-0.0150)		1.5350	(-0.0150)		1.5350	(-0.0150)		
Sample #2	0.8100	(0.0040)		1.5200	(0.0000)		1.5200	(0.0000)		1.5200	(0.0000)		
Sample #3	0.7730	(0.0220)		1.4940	(0.0190)		1.4940	(0.0190)		1.4940	(0.0190)		
Sample #4	0.7810	(0.0300)		1.4830	(0.0220)		1.4830	(0.0220)		1.4830	(0.0220)		
Avg % Abs	0.7880	(0.0187)		1.4990	(0.0137)		1.4990	(0.0137)		1.4990	(0.0137)		
STD DEV	0.0195	(0.0133)		0.0190	(0.0119)		0.0190	(0.0119)		0.0190	(0.0119)		
REL STD DEV	2.471	(71.339)		1.268	(87.295)		1.268	(87.295)		1.268	(87.295)		
-----													
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	1.4980	(-0.0110)		2.8440	(-0.0150)		2.8440	(-0.0150)		2.8440	(-0.0150)		
Sample #2	1.4590	(0.0260)		2.8310	(-0.0050)		2.8310	(-0.0050)		2.8310	(-0.0050)		
Sample #3	1.4730	(0.0200)		2.8320	(-0.0080)		2.8320	(-0.0080)		2.8320	(-0.0080)		
Sample #4	1.4700	(0.0230)		2.8320	(0.0000)		2.8320	(0.0000)		2.8320	(0.0000)		
Avg % Abs	1.4673	(0.0230)		2.8317	(-0.0043)		2.8317	(-0.0043)		2.8317	(-0.0043)		
STD DEV	0.0074	(0.0030)		0.0006	(0.0040)		0.0006	(0.0040)		0.0006	(0.0040)		
REL STD DEV	0.502	(13.043)		0.020	(93.264)		0.020	(93.264)		0.020	(93.264)		
-----													
Solution = 0.150 g/210L or 0.7143 mg/l, Samples = 4, Discarded = 1													
Sample	% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		
Sample #1	2.6510	(0.0000)		5.1020	(-0.0060)		5.1020	(-0.0060)		5.1020	(-0.0060)		
Sample #2	2.6830	(0.0000)		5.0970	(0.0210)		5.0970	(0.0210)		5.0970	(0.0210)		
Sample #3	2.6780	(0.0050)		5.1080	(0.0130)		5.1080	(0.0130)		5.1080	(0.0130)		
Sample #4	2.6260	(0.0250)		5.0950	(0.0190)		5.0950	(0.0190)		5.0950	(0.0190)		
Avg % Abs	2.6623	(0.0100)		5.1000	(0.0177)		5.1000	(0.0177)		5.1000	(0.0177)		
STD DEV	0.0316	(0.0132)		0.0070	(0.0042)		0.0070	(0.0042)		0.0070	(0.0042)		
REL STD DEV	1.186	(132.288)		0.137	(23.566)		0.137	(23.566)		0.137	(23.566)		
-----													
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	5.1350	(-0.0240)		9.7260	(0.0110)		9.7260	(0.0110)		9.7260	(0.0110)		
Sample #2	5.1270	(0.0000)		9.6850	(0.0320)		9.6850	(0.0320)		9.6850	(0.0320)		
Sample #3	5.0630	(0.0240)		9.6510	(0.0430)		9.6510	(0.0430)		9.6510	(0.0430)		
Sample #4	5.0360	(0.0370)		9.6250	(0.0390)		9.6250	(0.0390)		9.6250	(0.0390)		
Avg % Abs	5.0753	(0.0203)		9.6537	(0.0380)		9.6537	(0.0380)		9.6537	(0.0380)		
STD DEV	0.0467	(0.0188)		0.0301	(0.0056)		0.0301	(0.0056)		0.0301	(0.0056)		
REL STD DEV	0.921	(92.314)		0.312	(14.652)		0.312	(14.652)		0.312	(14.652)		
-----													

TOXL  
 Intoxilyzer - Alcohol Analyzer  
 Model 8000 SN 80-006490  
 09/04/2020 14:54:19

pg 2 of 2

Auto Calibration

<<<<< 3um >>>>>			<<<<< 9um >>>>>		
-----			-----		
Zero Order Coef	-251.90			-163.92	
First Order Coef	2716.45			1369.06	
Second Order Coef	25.33			12.22	
-----			-----		
Act	Fit	Residual	Act	Fit	Residual
(g/210L)	(g/210L)	(g/210L)	(g/210L)	(g/210L)	(g/210L)
0.000	0.000	-0.0002	0.000	-0.000	0.0002
0.040	0.040	0.0000	0.040	0.040	-0.0002
0.080	0.080	0.0004	0.080	0.080	-0.0000
0.150	0.150	-0.0004	0.150	0.150	0.0001
0.298	0.298	0.0001	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	4257.00	4393.00	
Sample #2	4338.00	4469.00	
Sample #3	4214.00	4421.00	
Sample #4	4352.00	4468.00	
Avg	4301.3335	4452.6665	
STD DEV	75.9561	27.4287	
REL STD DEV	1.766	0.616	
H2O adjust (mg/l*10k)	460	309	

Atmospheric Pressure = 958

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



TOXL  
 Intoxilyzer - Alcohol Analyzer  
 Model 8000 SN 80-006490  
 09/04/2020 14:54:19

Auto Calibration  
 Max Power Res Value = 85  
 Auto Range Res Value = 57

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

CMI, Inc. Intoxilyzer      Alcohol Analyzer  
North Dakota Model 8000      SN 80-006490  
Location = TOXL      8164.14.00 09/16  
09/04/2020      15:43

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	15:44
02 Std. Sol.	0.019	15:45
03 Room Air	0.000	15:45
04 Std. Sol.	0.019	15:46
05 Room Air	0.000	15:47
06 Std. Sol.	0.020	15:47
07 Room Air	0.000	15:48

08 Sim Temp = 34.0°C

Simul Ser No = MP5321

Std Sol No = 201810D

County = 08

Oper No. = 666666



Operator Signature

CHARLES EDER

Remarks:

Low AC 0  
0.020 AC  
CEE

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 80-006490  
Location = TOXL      8164.14.00 09/16  
09/04/2020      15:49

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	15:49
02 Std. Sol.	0.300	15:50
03 Room Air	0.000	15:51
04 Std. Sol.	0.301	15:51
05 Room Air	0.000	15:52
06 Std. Sol.	0.301	15:53
07 Room Air	0.000	15:53

08 Sim Temp = 34.0°C

Simul Ser No = MP3069

Std Sol No = 201902D

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 80-006490  
Location = TOXL      8164.14.00 09/16  
09/04/2020      15:55

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	15:56
02 Std. Gas	0.079	15:56
03 Room Air	0.000	15:56
04 Std. Gas	0.079	15:57
05 Room Air	0.000	15:57
06 Std. Gas	0.080	15:58
07 Room Air	0.000	15:58

Lot No = 34418080A2  
Cyl No = 7  
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 80-006490  
Location = TOXL      8164.14.00 09/16  
09/04/2020      15:58

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	15:59
02 Std. Gas	0.080	15:59
03 Room Air	0.000	16:00
04 Std. Gas	0.080	16:00
05 Room Air	0.000	16:01
06 Std. Gas	0.079	16:01
07 Room Air	0.000	16:02

Lot No = 34418080A2  
Cyl No = 7  
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 80-006490  
Location = TOXL                    8164.14.00 09/16  
09/04/2020                            16:02

DRY CAL CHECK

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

Lot No = 34418080A2  
Cyl No = 7  
Exp Date = 02/05/2021  
County = 08                            Oper No. = 666666



Operator Signature  
CHARLES EDER

Remarks: CALIBRATION CHECK  
0.080 AC

Form 106-I8000