

INTOXILYZER® 8000 CALIBRATION ADJUSTMENT

Intoxilyzer® 8000 Serial Number: 80-006666 Location: TOXL

- A. Flow Sensor Calibration and Verification Check (Level 3,M,C,F)
1.  Replaced o-rings if damaged <sup>ADJUST</sup>
  2. Flow Meter Serial Number: 55260 <sup>VERIFY</sup> 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. 167 L/S X 60 Sec/min = 10.02 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: 885 psi Regulator: 900 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 <i>(ACTUAL)</i>	NA – MilliQ H <sub>2</sub> O	NA – MilliQ H <sub>2</sub> O	MP3057
2	0.040 <i>(0.040)</i>	20060	2.10.22	MP3059
3	0.080 <i>(0.080)</i>	20330	7.1.22	MP5318
4	0.100 <i>(0.099)</i>	19370	12.9.21	MP3003
5	0.300 <i>(0.298)</i>	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. 926 mbar Displayed by Intoxilyzer® 8000
  - b. 956 mbar Adjusted to using barometer
  - c. 956 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>4430</u>	+	<u>331</u>		=	<u>4761</u>
9 $\mu$ m	<u>4309</u>	+	<u>452</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: MP3064 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.: 202001B Exp. Date: 1.28.22
- b. Dry Calibration Check: Known Value 0.08 AC  
 Lot No. 24119080A1 Cyl No. 5 Exp. Date: 11.5.21  
 Test 1 0.081 AC Test 4 0.082 AC Test 7 0.082 AC  
 Test 2 0.082 AC Test 5 0.081 AC Test 8 0.081 AC  
 Test 3 0.081 AC Test 6 0.081 AC Test 9 0.082 AC  
 Average 0.081 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  
FOR PROFICIENCY TESTING

Instrument is acceptable to be used in the field.

  
 Breath Analyst Signature

7/7/21  
 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 80-006666  
Location = TOXL                    8164.14.00 09/16  
07/07/2021                            15:57

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

1: Rate (Liters/min) = 5  
   SQRT(Diff)) = 6.707  
2: Rate (Liters/min) = 15  
   SQRT(Diff)) = 12.566  
3: Rate (Liters/min) = 30  
   SQRT(Diff)) = 22.020

Dependent Data Scale Factor = 100000 L/min

Independent Data Scale Factor = 256

Rounded Slope = 636

Rounded Intercept = -574580

Correlation = 0.99981



TOXL  
 Intoxilyzer - Alcohol Analyzer  
 Model 8000 SN 80-006666  
 07/07/2021 16:02:35

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	0.0660	(-0.0140)	0.1430	(0.0030)	
Sample #2	0.1020	(0.0400)	0.1660	(0.0110)	
Sample #3	0.0370	(0.1150)	0.1320	(0.0470)	
Sample #4	0.0600	(0.1290)	0.1570	(0.0400)	
Avg % Abs	0.0663	(0.0947)	0.1517	(0.0327)	
STD DEV	0.0330	(0.0479)	0.0176	(0.0191)	
REL STD DEV	49.688	(50.554)	11.615	(58.431)	
-----					
Solution = 0.040 g/210L or 0.1905 mg/l, Samples = 4, Discarded = 1					
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)	
Sample #1	0.7450	(0.0040)	1.5100	(0.0250)	
Sample #2	0.7610	(0.0230)	1.5090	(0.0340)	
Sample #3	0.7560	(0.0440)	1.5280	(0.0380)	
Sample #4	0.7480	(0.0620)	1.5180	(0.0410)	
Avg % Abs	0.7550	(0.0430)	1.5183	(0.0377)	
STD DEV	0.0066	(0.0195)	0.0095	(0.0035)	
REL STD DEV	0.869	(45.394)	0.626	(9.324)	
-----					
Solution = 0.080 g/210L or 0.3810 mg/l, Samples = 4, Discarded = 1					
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)	
Sample #1	1.4940	(-0.0070)	2.8870	(-0.0150)	
Sample #2	1.4510	(0.0310)	2.8570	(0.0170)	
Sample #3	1.4600	(0.0300)	2.8610	(0.0270)	
Sample #4	1.4750	(0.0280)	2.8730	(0.0240)	
Avg % Abs	1.4620	(0.0297)	2.8637	(0.0227)	
STD DEV	0.0121	(0.0015)	0.0083	(0.0051)	
REL STD DEV	0.829	(5.149)	0.291	(22.639)	
-----					
Solution = 0.099 g/210L or 0.4714 mg/l, Samples = 4, Discarded = 1					
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)	
Sample #1	1.8550	(-0.0280)	3.5610	(-0.0110)	
Sample #2	1.8200	(0.0040)	3.5420	(0.0180)	
Sample #3	1.8720	(-0.0080)	3.5760	(0.0000)	
Sample #4	1.8320	(0.0000)	3.5560	(0.0090)	
Avg % Abs	1.8413	(-0.0013)	3.5580	(0.0090)	
STD DEV	0.0272	(0.0061)	0.0171	(0.0090)	
REL STD DEV	1.479	(458.258)	0.480	(100.000)	
-----					
Solution = 0.298 g/210L or 1.4190 mg/l, Samples = 4, Discarded = 1					
Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)	
Sample #1	5.2170	(-0.0140)	9.7560	(-0.0110)	
Sample #2	5.1800	(-0.0120)	9.7310	(0.0220)	
Sample #3	5.1910	(-0.0470)	9.7540	(0.0040)	
Sample #4	5.2130	(-0.0820)	9.7650	(-0.0020)	
Avg % Abs	5.1947	(-0.0470)	9.7500	(0.0080)	
STD DEV	0.0168	(0.0350)	0.0173	(0.0125)	
REL STD DEV	0.323	(74.468)	0.178	(156.125)	
-----					

TOXL  
 Intoxilyzer - Alcohol Analyzer  
 Model 8000 SN 80-006666  
 07/07/2021 16:02:35

Auto Calibration

<<<<< 3um >>>>>  
 -----  
 Zero Order Coef -141.58  
 First Order Coef 2629.99  
 Second Order Coef 24.69  
 -----

<<<<< 9um >>>>>  
 -----  
 Zero Order Coef -186.90  
 First Order Coef 1342.81  
 Second Order Coef 13.49  
 -----

Act (g/210L)	Fit (g/210L)	Residual (g/210L)
0.000	0.001	-0.0007
0.040	0.039	0.0010
0.080	0.079	0.0011
0.099	0.100	-0.0015
0.298	0.298	0.0001

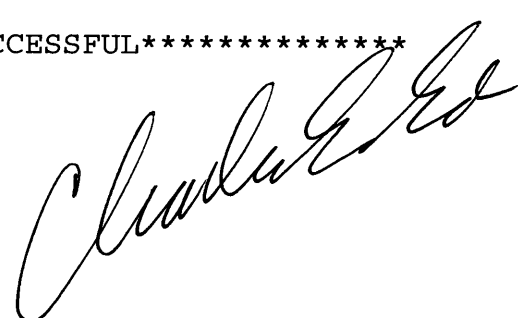
Act (g/210L)	Fit (g/210L)	Residual (g/210L)
0.000	0.000	-0.0004
0.040	0.040	0.0005
0.080	0.079	0.0008
0.099	0.100	-0.0010
0.298	0.298	0.0001

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

Sample	3um	9um
Sample #1	4489.00	4375.00
Sample #2	4415.00	4288.00
Sample #3	4457.00	4329.00
Sample #4	4419.00	4312.00
Avg	4430.3335	4309.6665
STD DEV	23.1805	20.5994
REL STD DEV	0.523	0.478
H2O adjust (mg/l*10k)	331	452

Atmospheric Pressure = 956

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



TOXL  
 Intoxilyzer - Alcohol Analyzer  
 Model 8000 SN 80-006666  
 07/07/2021 16:02:35  
 Auto Calibration  
 Max Power Res Value = 47  
 Min Power Res Value = 24

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

CMI, Inc. Intoxilyzer      Alcohol Analyzer  
North Dakota Model 8000      SN 80-006666  
Location = TOXL      8164.14.00 09/16  
07/07/2021      16:43

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	16:44
02 Std. Sol.	0.018	16:45
03 Room Air	0.000	16:45
04 Std. Sol.	0.018	16:46
05 Room Air	0.000	16:46
06 Std. Sol.	0.019	16:47
07 Room Air	0.000	16:48

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 80-006666  
Location = TOXL      8164.14.00 09/16  
07/07/2021      16:53

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	16:54
02 Std. Sol.	0.293	16:55
03 Room Air	0.000	16:55
04 Std. Sol.	0.293	16:56
05 Room Air	0.000	16:56
06 Std. Sol.	0.294	16:57
07 Room Air	0.000	16:58

08 Sim Temp = 34.0°C

Simul Ser No = MP5317  
Std Sol No = 202001B  
County = 08      Oper No. = 666666



Operator Signature  
CHARLES EDER

Remarks:

HIGH AC  
0.300 AC

Form 106-I8000

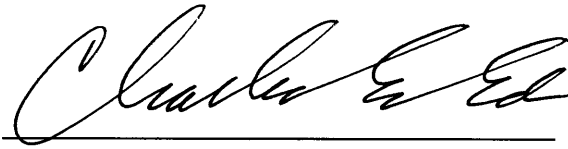
Intoxilyzer Test Record and Checklist  
NDOAG Crime Lab. Div., Bismarck, ND 58501

CMI, Inc. Intoxilyzer      Alcohol Analyzer  
North Dakota Model 8000      SN 80-006666  
Location = TOXL      8164.14.00 09/16  
07/07/2021      16:59

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	17:00
02 Std. Gas	0.081	17:00
03 Room Air	0.000	17:00
04 Std. Gas	0.082	17:01
05 Room Air	0.000	17:01
06 Std. Gas	0.081	17:02
07 Room Air	0.000	17:02

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 80-006666  
Location = TOXL      8164.14.00 09/16  
07/07/2021      17:02

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	17:03
02 Std. Gas	0.082	17:03
03 Room Air	0.000	17:04
04 Std. Gas	0.081	17:04
05 Room Air	0.000	17:05
06 Std. Gas	0.081	17:05
07 Room Air	0.000	17:05

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 80-006666  
Location = TOXL      8164.14.00 09/16  
07/07/2021      17:06

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	17:06
02 Std. Gas	0.082	17:06
03 Room Air	0.000	17:07
04 Std. Gas	0.081	17:07
05 Room Air	0.000	17:08
06 Std. Gas	0.082	17:08
07 Room Air	0.000	17:09

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