

INTOXILYZER® 8000 CALIBRATION ADJUSTMENT

Intoxilyzer® 8000 Serial Number: 80-005939 Location: TOXL

- A. Flow Sensor Calibration and Verification Check (Level 3,M,C,F)
1.  Replaced o-rings if damaged 55260
  2. Flow Meter Serial Number: 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. 144 L/S X 60 Sec/min = 9.84 L/min
    - b. 20 L/min: 0. 320 L/S X 60 Sec/min = 19.2 L/min
    - c.  Flow Rates within  $\pm 1$  L/min of Expected Value
- B. Gas Tank Sensor Check (Level 3,D,G)
1. Display: 521 psi Regulator: 500 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	NA – MilliQ H <sub>2</sub> O	NA – MilliQ H <sub>2</sub> O	DR 7111
2	<u>0.040</u>	<u>2018080</u>	<u>8.22.20</u>	<u>DR 7347</u>
3	<u>0.081</u>	<u>201807C</u>	<u>7.25.20</u>	<u>DR 5114</u>
4	<u>0.151</u>	<u>201811E</u>	<u>11.26.20</u>	<u>DR 5131</u>
5	<u>0.298</u>	<u>19010</u>	<u>1.3.21</u>	<u>DR 7346</u>

3. 0.100 AC Calibration Gas for H<sub>2</sub>O Adjustment
  - a. Lot No. 13518100A3 Cyl No. 006 Exp. Date: 8.5.20
4. Atmospheric Pressure
  - a. 954 mbar Displayed by Intoxilyzer® 8000
  - b. 953 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  $\leq$  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 H<sub>2</sub>O 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>4541</u>	+	<u>220</u>	=	<u>4761</u>
9 $\mu$ m	<u>4521</u>	+	<u>240</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  
MP5321 Sim. SN: 201810A Lot No.: 201810D Exp. Date: 10.24.20
    - ii. High AC Known Value  $\geq$  0.25 AC: 0.250 AC  
Sim. SN: MP5290 Lot No.: 201911B Exp. Date: 11.5.21
  - b. Dry Calibration Check: Known Value 0.08 AC  
Lot No. 05620080A1 Cyl No. 048 Exp. Date: 4.5.22  
Test 1 0.080 AC    Test 4 0.080 AC    Test 7 0.080 AC  
Test 2 0.080 AC    Test 5 0.080 AC    Test 8 0.079 AC  
Test 3 0.079 AC    Test 6 0.080 AC    Test 9 0.079 AC  
Average 0.079 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: CLASSROOM ONLY.  
Annual Inspection. No external battery.  
Cal adjust due to low reading on 0.250 AC and 0.300 AC standard.

TRAINING FOR KALIBRIES. CEE  
6.18.20

Instrument is acceptable to be used in the field.

Kelly Hiet / Charles E. El  
Breath Analyst Signature

18 JUN 20 / 6.18.2020  
Date

Charles E. El  
Reviewed by

6.18.2020  
Date

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

CMI, Inc. Intoxilyzer            Alcohol Analyzer  
North Dakota Model 8000            SN 80-005939  
Location = TOXL                    8164.14.00 09/16  
06/18/2020                            11:15

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

- 1: Rate (Liters/min) = 5  
   SQRT(Diff)) = 7.613
- 2: Rate (Liters/min) = 15  
   SQRT(Diff)) = 12.449
- 3: Rate (Liters/min) = 30  
   SQRT(Diff)) = 23.234

Dependent Data Scale Factor = 100000 L/min

Independent Data Scale Factor = 256

Rounded Slope = 611

Rounded Intercept = -592495

Correlation = 0.99486

*Kari L. Hieb*

INTOXILYZER 8000  
Instrument Initialization  
10:39 06/18/2020

TOXL  
Intoxilyzer - Alcohol Analyzer  
Model 8000                    SN 80-005939  
06/18/2020                    11:30:44

Auto Calibration  
Max Power Res Value = 24

Auto Range Res Value = 7

TOXL  
 Intoxilyzer - Alcohol Analyzer  
 Model 8000 SN 80-005939  
 06/18/2020 11:30:44

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	0.0620	(0.0030)	0.1420	(0.0030)
Sample #2	0.0350	(0.0430)	0.1400	(0.0050)
Sample #3	0.0280	(0.0740)	0.1290	(0.0260)
Sample #4	0.0820	(0.0670)	0.1260	(0.0220)
Avg % Abs	0.0483	(0.0613)	0.1317	(0.0177)
STD DEV	0.0294	(0.0163)	0.0074	(0.0112)
REL STD DEV	60.756	(26.508)	5.598	(63.116)

-----  
 Solution = 0.040 g/210L or 0.1905 mg/l, Samples = 4, Discarded = 1  

Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)
Sample #1	0.6680	(0.0040)	1.3730	(0.0150)
Sample #2	0.6850	(0.0020)	1.4400	(-0.0260)
Sample #3	0.6970	(0.0120)	1.4570	(-0.0330)
Sample #4	0.7180	(0.0150)	1.4900	(-0.0310)
Avg % Abs	0.7000	(0.0097)	1.4623	(-0.0300)
STD DEV	0.0167	(0.0068)	0.0254	(0.0036)
REL STD DEV	2.386	(70.416)	1.739	(12.019)

-----  
 Solution = 0.081 g/210L or 0.3857 mg/l, Samples = 4, Discarded = 1  

Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)
Sample #1	1.3160	(-0.0070)	2.7500	(-0.0110)
Sample #2	1.3920	(-0.0340)	2.8240	(-0.0570)
Sample #3	1.3570	(-0.0090)	2.8140	(-0.0420)
Sample #4	1.3360	(0.0120)	2.7960	(-0.0310)
Avg % Abs	1.3617	(-0.0103)	2.8113	(-0.0433)
STD DEV	0.0283	(0.0230)	0.0142	(0.0131)
REL STD DEV	2.078	(222.861)	0.505	(30.118)

-----  
 Solution = 0.151 g/210L or 0.7190 mg/l, Samples = 4, Discarded = 1  

Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)
Sample #1	2.4730	(-0.0200)	5.0050	(-0.0180)
Sample #2	2.4780	(-0.0010)	5.0780	(-0.0290)
Sample #3	2.4770	(0.0130)	5.0550	(-0.0210)
Sample #4	2.4790	(0.0140)	5.0540	(-0.0260)
Avg % Abs	2.4780	(0.0087)	5.0623	(-0.0253)
STD DEV	0.0010	(0.0084)	0.0136	(0.0040)
REL STD DEV	0.040	(96.767)	0.268	(15.953)

-----  
 Solution = 0.298 g/210L or 1.4190 mg/l, Samples = 4, Discarded = 1  

Sample	% Abs	(% Abs Ref)	% Abs	(% Abs Ref)
Sample #1	4.9060	(0.0000)	9.7470	(-0.0050)
Sample #2	4.8470	(0.0670)	9.7030	(0.0620)
Sample #3	4.8970	(0.0560)	9.7320	(0.0670)
Sample #4	4.8590	(0.0630)	9.7350	(0.0620)
Avg % Abs	4.8677	(0.0620)	9.7233	(0.0637)
STD DEV	0.0261	(0.0056)	0.0177	(0.0029)
REL STD DEV	0.536	(8.980)	0.182	(4.534)

TOXL  
 Intoxilyzer - Alcohol Analyzer  
 Model 8000 SN 80-005939  
 06/18/2020 11:30:44

Auto Calibration

pg 2 of 2

<<<<< 3um >>>>>			<<<<< 9um >>>>>		
-----			-----		
Zero Order Coef	-157.26			-195.10	
First Order Coef	2966.27			1431.65	
Second Order Coef	-3.69			4.94	
-----			-----		
Act	Fit	Residual	Act	Fit	Residual
(g/210L)	(g/210L)	(g/210L)	(g/210L)	(g/210L)	(g/210L)
0.000	-0.000	0.0003	0.000	-0.000	0.0001
0.040	0.040	-0.0003	0.040	0.040	-0.0001
0.081	0.081	-0.0004	0.081	0.081	-0.0002
0.151	0.151	0.0004	0.151	0.151	0.0002
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	4587.00	4455.00	
Sample #2	4572.00	4527.00	
Sample #3	4459.00	4515.00	
Sample #4	4594.00	4523.00	
Avg	4541.6665	4521.6665	
STD DEV	72.4316	6.1101	
REL STD DEV	1.595	0.135	
H2O adjust (mg/l*10k)	220	240	

Atmospheric Pressure = 954

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

*Kali J. Hieb*

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

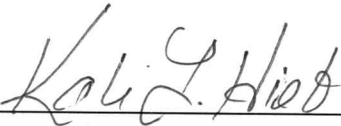
CMI, Inc. Intoxilyzer            Alcohol Analyzer  
North Dakota Model 8000        SN 80-005939  
Location = TOXL                    8164.14.00 09/16  
06/18/2020                            13:35

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	13:35
02 Std. Sol.	0.019	13:37
03 Room Air	0.000	13:37
04 Std. Sol.	0.021	13:38
05 Room Air	0.000	13:38
06 Std. Sol.	0.019	13:39
07 Room Air	0.000	13:40

08 Sim Temp = 33.9°C

Simul Ser No = MP5321  
Std Sol No = 201810D  
County = 08                            Oper No. = 123456

  
\_\_\_\_\_  
Operator Signature  
N/A STUDENT

Remarks: *Cal Check*  
*Low AC 0.020 AC*

Form 106-I8000

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

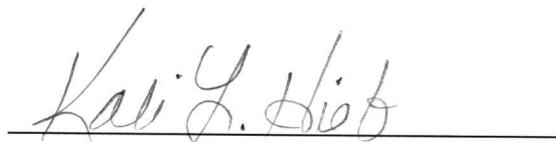
CMI, Inc. Intoxilyzer                    Alcohol Analyzer  
North Dakota Model 8000                SN 80-005939  
Location = TOXL                            8164.14.00 09/16  
06/18/2020    13:42

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	13:42
02 Std. Sol.	0.251	13:43
03 Room Air	0.000	13:44
04 Std. Sol.	0.251	13:44
05 Room Air	0.000	13:45
06 Std. Sol.	0.251	13:46
07 Room Air	0.000	13:46

08 Sim Temp = 34.0°C

Simul Ser No = MP5290  
Std Sol No = 201911B  
County = 08    Oper No. = 123456



Operator Signature  
N/A STUDENT

Remarks: Cal Check  
High AC 0.250 AC

Form 106-I8000

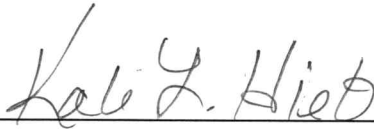
Intoxilyzer Test Record and Checklist  
NDOAG Crime Lab. Div., Bismarck, ND 58501

CMI, Inc. Intoxilyzer            Alcohol Analyzer  
North Dakota Model 8000            SN 80-005939  
Location = TOXL                    8164.14.00 09/16  
06/18/2020                            13:49

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	13:50
02 Std. Gas	0.080	13:50
03 Room Air	0.000	13:51
04 Std. Gas	0.080	13:51
05 Room Air	0.000	13:52
06 Std. Gas	0.079	13:52
07 Room Air	0.000	13:52

Lot No = 05620080A1  
Cyl No = 48  
Exp Date = 04/05/2022  
County = 08                            Oper No. = 123456

  
\_\_\_\_\_  
Operator Signature  
N/A STUDENT

Remarks: *cal check 0.080 AC*

Form 106-I8000



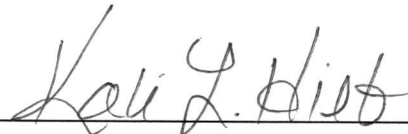
Intoxilyzer Test Record and Checklist  
NDOAG Crime Lab. Div., Bismarck, ND 58501

CMI, Inc. Intoxilyzer            Alcohol Analyzer  
North Dakota Model 8000        SN 80-005939  
Location = TOXL                    8164.14.00 09/16  
06/18/2020                            13:53

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	13:54
02 Std. Gas	0.080	13:54
03 Room Air	0.000	13:55
04 Std. Gas	0.080	13:55
05 Room Air	0.000	13:56
06 Std. Gas	0.080	13:56
07 Room Air	0.000	13:57

Lot No = 05620080A1  
Cyl No = 48  
Exp Date = 04/05/2022  
County = 08                            Oper No. = 123456

  
\_\_\_\_\_  
Operator Signature  
N/A STUDENT

Remarks: *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 80-005939  
Location = TOXL                    8164.14.00 09/16  
06/18/2020                            13:58

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	13:58
02 Std. Gas	0.080	13:59
03 Room Air	0.000	13:59
04 Std. Gas	0.079	14:00
05 Room Air	0.000	14:00
06 Std. Gas	0.079	14:00
07 Room Air	0.000	14:01

Lot No = 05620080A1  
Cyl No = 48  
Exp Date = 04/05/2022  
County = 08                            Oper No. = 123456

  
\_\_\_\_\_  
Operator Signature  
N/A STUDENT

Remarks: *cal check 0.080 AC*

Form 106-I8000