

INTOXILYZER® 8000 CALIBRATION ADJUSTMENT

Intoxilyzer® 8000 Serial Number: 80-004199 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: 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. 171 L/S X 60 Sec/min = 10.26 L/min
    - b. 20 L/min: 0. 332 L/S X 60 Sec/min = 19.92 L/min
    - c.  Flow Rates within  $\pm 1$  L/min of Expected Value
- B. Gas Tank Sensor Check (Level 3,D,G)
1. Display: 901 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 (ACTUAL)	NA - MilliQ H <sub>2</sub> O	NA - MilliQ H <sub>2</sub> O	MP 3066
2	0.040 (0.040)	201808D	8-22-20	MP 3067
3	0.080 (0.082)	201707E	7-25-19	MP 3068
4	0.150 (0.151)	201811E	11-26-20	MP 3069
5	0.300 (0.301)	201803H	3-22-20	MP 3070

3. 0.100 AC Calibration Gas for H<sub>2</sub>O Adjustment
  - a. Lot No. 13518100A3 Cyl No. 6 Exp. Date: 8.5.20
4. Atmospheric Pressure
  - a. 936 mbar Displayed by Intoxilyzer® 8000
  - b. 959 mbar Adjusted to using barometer
  - c. 959 mbar on Auto Calibration Report printout
5.  Screen displayed "Calibration Success"

6.  Calibration Adjustment Printout Attached
- Solution 1 Avg % Abs  $\leq 0.2500$
  - Solution 2-5 REL STD DEV  $\leq 3.000$
  - Residual (g/210 L) Values for Solutions 1-5  $\leq 0.0020$  for 3  $\mu\text{m}$  and 9  $\mu\text{m}$  channels
  - Dry Gas H<sub>2</sub>O Adjustment Sum for 3  $\mu\text{m}$  and 9  $\mu\text{m}$  channels within  $\pm 10$

	Average		H <sub>2</sub> O Adjust	
3 $\mu\text{m}$	<u>4550</u>	+	<u>211</u>	= <u>4761</u>
9 $\mu\text{m}$	<u>4386</u>	+	<u>375</u>	= <u>4761</u>

7.  Optical Bench Calibration Verification (Level 1, S and C)
- Wet Calibration Check
    - Low AC Known Value  $\leq 0.03$  AC: 0.015 AC  
 Sim. SN: DR5113 Lot No.: 201805C Exp. Date: 5.30.20
    - High AC Known Value  $\geq 0.25$  AC: 0.250 AC  
 Sim. SN: DR7351 Lot No.: 201803G Exp. Date: 3.22.20
  - Dry Calibration Check: Known Value 0.08 AC  
 Lot No. 34917080A3 Cyl No. 7 Exp. Date: 2.5.20  
 Test 1 0.079 AC Test 4 0.080 AC Test 7 0.080 AC  
 Test 2 0.078 AC Test 5 0.079 AC Test 8 0.079 AC  
 Test 3 0.079 AC Test 6 0.079 AC Test 9 0.079 AC  
 Average 0.079 AC
  - 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: ADJUSTED DUE TO 0.080 AC STANDARD  
READING 0.077 & 0.076 AC DURING  
INTOX CLASSES.

Instrument is acceptable to be used in the field.

  
 Breath Analyst Signature

6.17.2019  
 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 80-004199  
Location = TOXL      8164.14.00 09/16  
06/17/2019      09:49

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

1: Rate (Liters/min) = 5  
   SQRT(Diff)) = 6.855  
2: Rate (Liters/min) = 15  
   SQRT(Diff)) = 12.449  
3: Rate (Liters/min) = 30  
   SQRT(Diff)) = 23.129

Dependent Data Scale Factor = 100000 L/min

Independent Data Scale Factor = 256

Rounded Slope = 593

Rounded Intercept = -481610

Correlation = 0.99798



FLOW SENSOR CAL

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TOXL  
Intoxilyzer - Alcohol Analyzer  
Model 8000      SN 80-004199  
06/17/2019      10:35:17

Auto Calibration  
Max Power Res Value = 41  
Auto Range Res Value = 18

TOXL  
 Intoxilyzer - Alcohol Analyzer  
 Model 8000 SN 80-004199  
 06/17/2019 10:38:17

Auto Calibration

pg 1 of 2

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<<<<<      3um      >>>>>
-----
Solution = 0.000 g/210L or 0.0000 mg/l, Samples = 4, Discarded = 1
Sample      % Abs      (% Abs Ref)      % Abs      (% Abs Ref)
Sample #1   0.0970      (0.0060)         0.1680      (0.0030)
Sample #2   0.0550      (0.1040)         0.1190      (0.0520)
Sample #3   0.0550      (0.1520)         0.1520      (0.0530)
Sample #4   0.0880      (0.1750)         0.1470      (0.0720)
Avg % Abs   0.0660      (0.1437)         0.1393      (0.0590)
STD DEV     0.0191      (0.0362)         0.0178      (0.0113)
REL STD DEV 28.868      (25.215)         12.765      (19.101)
  
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-----
Solution = 0.040 g/210L or 0.1905 mg/l, Samples = 4, Discarded = 1
Sample      % Abs      (% Abs Ref)      % Abs      (% Abs Ref)
Sample #1   0.7770      (-0.0090)        1.5440      (-0.0020)
Sample #2   0.7380      (0.0300)         1.5210      (0.0130)
Sample #3   0.7530      (0.0550)         1.5200      (0.0200)
Sample #4   0.7510      (0.0490)         1.5200      (0.0220)
Avg % Abs   0.7473      (0.0447)         1.5203      (0.0183)
STD DEV     0.0081      (0.0131)         0.0006      (0.0047)
REL STD DEV 1.090      (29.219)         0.038      (25.777)
  
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-----
Solution = 0.082 g/210L or 0.3905 mg/l, Samples = 4, Discarded = 1
Sample      % Abs      (% Abs Ref)      % Abs      (% Abs Ref)
Sample #1   1.4670      (0.0140)         2.8970      (-0.0010)
Sample #2   1.4620      (0.0370)         2.9140      (0.0290)
Sample #3   1.4200      (0.0580)         2.9130      (0.0220)
Sample #4   1.4690      (0.0440)         2.9430      (0.0240)
Avg % Abs   1.4503      (0.0463)         2.9233      (0.0250)
STD DEV     0.0265      (0.0107)         0.0170      (0.0036)
REL STD DEV 1.827      (23.078)         0.583      (14.422)
  
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-----
Solution = 0.151 g/210L or 0.7190 mg/l, Samples = 4, Discarded = 1
Sample      % Abs      (% Abs Ref)      % Abs      (% Abs Ref)
Sample #1   2.6060      (0.0130)         5.1710      (-0.0050)
Sample #2   2.6430      (0.0220)         5.1990      (0.0240)
Sample #3   2.6030      (0.0430)         5.1810      (0.0370)
Sample #4   2.6260      (0.0440)         5.2060      (0.0360)
Avg % Abs   2.6240      (0.0363)         5.1953      (0.0323)
STD DEV     0.0201      (0.0124)         0.0129      (0.0072)
REL STD DEV 0.765      (34.192)         0.248      (22.374)
  
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-----
Solution = 0.301 g/210L or 1.4333 mg/l, Samples = 4, Discarded = 1
Sample      % Abs      (% Abs Ref)      % Abs      (% Abs Ref)
Sample #1   5.0380      (0.0180)         9.8160      (-0.0150)
Sample #2   5.1030      (0.0180)         9.8960      (0.0110)
Sample #3   5.0690      (0.0350)         9.8650      (0.0280)
Sample #4   5.0730      (0.0390)         9.8830      (0.0290)
Avg % Abs   5.0817      (0.0307)         9.8813      (0.0227)
STD DEV     0.0186      (0.0112)         0.0156      (0.0101)
REL STD DEV 0.366      (36.360)         0.158      (44.629)
  
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TOXL  
 Intoxilyzer - Alcohol Analyzer  
 Model 8000 SN 80-004199  
 06/17/2019 10:38:17

Auto Calibration

pg 2 of 2

<<<< 3um >>>>  
 -----  
 Zero Order Coef -175.12  
 First Order Coef 2772.07  
 Second Order Coef 16.20

<<<< 9um >>>>  
 -----  
 -192.37  
 1368.41  
 10.27

Act (g/210L)	Fit (g/210L)	Residual (g/210L)
0.000	0.000	-0.0002
0.040	0.040	-0.0000
0.082	0.081	0.0005
0.151	0.151	-0.0004
0.301	0.301	0.0001

Act (g/210L)	Fit (g/210L)	Residual (g/210L)
0.000	-0.000	0.0000
0.040	0.040	-0.0001
0.082	0.082	0.0002
0.151	0.151	-0.0001
0.301	0.301	0.0000

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

<<<< 9um >>>>  
 -----

Sample	3um	9um
Sample #1	4611.00	4425.00
Sample #2	4589.00	4373.00
Sample #3	4516.00	4392.00
Sample #4	4545.00	4395.00
Avg	4550.0000	4386.6665
STD DEV	36.7560	11.9304
REL STD DEV	0.808	0.272
H2O adjust (mg/l*10k)	211	375

Atmospheric Pressure = 959

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



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

CMI, Inc. Intoxilyzer      Alcohol Analyzer  
North Dakota Model 8000      SN 80-004199  
Location = TOXL      8164.14.00 09/16  
06/17/2019      11:32

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	11:32
02 Std. Sol.	0.014	11:33
03 Room Air	0.000	11:33
04 Std. Sol.	0.014	11:34
05 Room Air	0.000	11:35
06 Std. Sol.	0.015	11:35
07 Room Air	0.000	11:36

08 Sim Temp = 34.0°C

Simul Ser No = DR5113

Std Sol No = 201805C

County = 08

Oper No. = 666666



Operator Signature

CHARLES EDER

Remarks:

Low AC

0.015 AC

Form 106-I8000

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

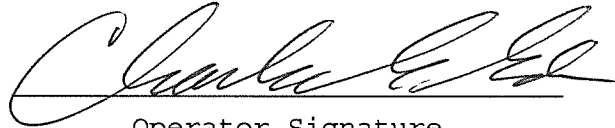
CMI, Inc. Intoxilyzer      Alcohol Analyzer  
North Dakota Model 8000      SN 80-004199  
Location = TOXL      8164.14.00 09/16  
06/17/2019      11:25

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	11:26
02 Std. Sol.	0.248	11:27
03 Room Air	0.000	11:27
04 Std. Sol.	0.247	11:28
05 Room Air	0.000	11:28
06 Std. Sol.	0.248	11:29
07 Room Air	0.000	11:30

08 Sim Temp = 34.0°C

Simul Ser No = DR7351  
Std Sol No = 201803G  
County = 08      Oper No. = 666666



Operator Signature  
CHARLES EDER

Remarks:

HIGH  $\phi$  CEE 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 80-004199  
Location = TOXL      8164.14.00 09/16  
06/17/2019      11:38

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	11:38
02 Std. Gas	0.079	11:38
03 Room Air	0.000	11:39
04 Std. Gas	0.078	11:39
05 Room Air	0.000	11:40
06 Std. Gas	0.079	11:40
07 Room Air	0.000	11:41

Lot No = 34917080A3  
Cyl No = 7  
Exp Date = 02/05/2020  
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 80-004199  
Location = TOXL      8164.14.00 09/16  
06/17/2019      11:42

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	11:43
02 Std. Gas	0.080	11:43
03 Room Air	0.000	11:44
04 Std. Gas	0.079	11:44
05 Room Air	0.000	11:45
06 Std. Gas	0.079	11:45
07 Room Air	0.000	11:45

Lot No = 34917080A3  
Cyl No = 7  
Exp Date = 02/05/2020  
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 80-004199  
Location = TOXL      8164.14.00 09/16  
06/17/2019      11:46

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	11:46
02 Std. Gas	0.080	11:46
03 Room Air	0.000	11:47
04 Std. Gas	0.079	11:47
05 Room Air	0.000	11:48
06 Std. Gas	0.079	11:48
07 Room Air	0.000	11:49

Lot No = 34917080A3  
Cyl No = 7  
Exp Date = 02/05/2020  
County = 08      Oper No. = 666666



Operator Signature  
CHARLES EDER

Remarks: CALIBRATION CHECK  
0.080 AC

Form 106-I8000