

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 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 ≥ 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 ± 1 L/min of Expected Value
- B. Gas Tank Sensor Check (Level 3,D,G)
1. Display: 874 psi Regulator: 875 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 ≥ 10
 - b. Auto Range Res Value ≥ 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 ₂ O	NA - MilliQ H ₂ O	MP3066
2	0.040 (0.040)	201808D	8.22.20	MP3067
3	0.080 (0.082)	201707E	7.25.19	MP3068
4	0.150 (0.151)	201811E	11.26.20	MP3069
5	0.300 (0.301)	201803H	3.22.20	MP3070

3. 0.100 AC Calibration Gas for H₂O Adjustment
 - a. Lot No. 13518100A3 Cyl No. 6 Exp. Date: 8.5.20
4. Atmospheric Pressure
 - a. 945 mbar Displayed by Intoxilyzer® 8000
 - b. 950 ~~950.00~~ mbar Adjusted to using barometer
 - c. 949 mbar on Auto Calibration Report printout
5. Screen displayed "Calibration Success"

- 6. Calibration Adjustment Printout Attached
 - a. Solution 1 Avg % Abs ≤ 0.2500
 - b. Solution 2-5 REL STD DEV ≤ 3.000
 - c. Residual (g/210 L) Values for Solutions 1-5 ≤ 0.0020 for 3 μm and 9 μm channels
 - d. Dry Gas H₂O Adjustment Sum for 3 μm and 9 μm channels within ± 10

	Average	+	H ₂ O Adjust	=	
3 μm	<u>4514</u>		<u>247</u>		<u>4761</u>
9 μm	<u>4410</u>		<u>351</u>		<u>4761</u>

- 7. Optical Bench Calibration Verification (Level 1, S and C)
 - a. Wet Calibration Check
 - i. Low AC Known Value ≤ 0.03 AC: 0.015 AC
 Sim. SN: DR5113 Lot No.: 201805C Exp. Date: 5.30.20
 - ii. High AC Known Value ≥ 0.25 AC: 0.250 AC
 Sim. SN: DR7351 Lot No.: 201803G Exp. Date: 3.22.20
 - b. Dry Calibration Check: Known Value 0.08 AC
 Lot No. 349187080A3 Cyl No. 7 Exp. Date: 2/5/20
 Test 1 0.079 AC Test 4 0.079 AC Test 7 0.079 AC
 Test 2 0.079 AC Test 5 0.079 AC Test 8 0.079 AC
 Test 3 0.080 AC Test 6 0.079 AC Test 9 0.079 AC
 Average 0.079 AC
 - c. Wet Calibration Check and Dry Calibration Check AC results are within ± 0.005 or $\pm 5\%$ (whichever is greater) of stated value.

D. Remarks/Maintenance: ADJUSTMENT FOR PROFICIENCY TESTING

Instrument is acceptable to be used in the field.

Charles E. Ed
 Breath Analyst Signature

6.19.2019

Date

NA

NA

Reviewed by

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
06/19/2019 15:04

Flow Rate Calibration*****

1: Rate (Liters/min) = 5
 SQRT(Diff)) = 7.348
2: Rate (Liters/min) = 15
 SQRT(Diff)) = 12.121
3: Rate (Liters/min) = 30
 SQRT(Diff)) = 22.559

Dependent Data Scale Factor = 100000 L/min
Independent Data Scale Factor = 256
Rounded Slope = 629
Rounded Intercept = -588722
Correlation = 0.99532


FLOW SENSOR CALIBRATION

TOXL
Intoxilyzer - Alcohol Analyzer
Model 8000 SN 80-006666
06/19/2019 15:11:52

Auto Calibration
Max Power Res Value = 48
Auto Range Res Value = 24

TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-006666
 06/19/2019 15:11:52

Auto Calibration

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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     0.0750      (0.0040)          0.1640      (-0.0100)
Sample #2     0.0660      (0.0530)          0.1650      (-0.0030)
Sample #3     0.0560      (0.1030)          0.1600      (0.0070)
Sample #4     0.0370      (0.1370)          0.1540      (0.0160)
Avg % Abs     0.0530      (0.0977)          0.1597      (0.0067)
STD DEV       0.0147      (0.0423)          0.0055      (0.0095)
REL STD DEV   27.794      (43.263)          3.449       (142.566)
  -----

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  <<<<<      9um      >>>>>
  -----
Solution = 0.040 g/210L or 0.1905 mg/l, Samples = 4, Discarded = 1
  Sample      % Abs      (% Abs Ref)      % Abs      (% Abs Ref)
Sample #1     0.7870      (0.0110)          1.5190      (0.0000)
Sample #2     0.7510      (0.0450)          1.5180      (-0.0070)
Sample #3     0.7580      (0.0540)          1.5170      (0.0000)
Sample #4     0.7870      (0.0540)          1.5320      (0.0000)
Avg % Abs     0.7653      (0.0510)          1.5223      (-0.0023)
STD DEV       0.0191      (0.0052)          0.0084      (0.0040)
REL STD DEV   2.494      (10.189)          0.551       (173.205)
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  <<<<<      3um      >>>>>
  -----
Solution = 0.082 g/210L or 0.3905 mg/l, Samples = 4, Discarded = 1
  Sample      % Abs      (% Abs Ref)      % Abs      (% Abs Ref)
Sample #1     1.5000      (0.0050)          2.9080      (0.0120)
Sample #2     1.5050      (0.0080)          2.9410      (0.0200)
Sample #3     1.5190      (0.0230)          2.9350      (0.0230)
Sample #4     1.5300      (0.0150)          2.9350      (0.0260)
Avg % Abs     1.5180      (0.0153)          2.9370      (0.0230)
STD DEV       0.0125      (0.0075)          0.0035      (0.0030)
REL STD DEV   0.825      (48.949)          0.118       (13.043)
  -----

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  <<<<<      9um      >>>>>
  -----
Solution = 0.151 g/210L or 0.7190 mg/l, Samples = 4, Discarded = 1
  Sample      % Abs      (% Abs Ref)      % Abs      (% Abs Ref)
Sample #1     2.6480      (-0.0100)          5.0690      (0.0040)
Sample #2     2.6940      (-0.0160)          5.1250      (0.0000)
Sample #3     2.6960      (-0.0020)          5.1140      (0.0110)
Sample #4     2.6970      (-0.0010)          5.1350      (0.0230)
Avg % Abs     2.6957      (-0.0063)          5.1247      (0.0113)
STD DEV       0.0015      (0.0084)          0.0105      (0.0115)
REL STD DEV   0.057      (132.418)          0.205       (101.503)
  -----

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  <<<<<      3um      >>>>>
  -----
Solution = 0.301 g/210L or 1.4333 mg/l, Samples = 4, Discarded = 1
  Sample      % Abs      (% Abs Ref)      % Abs      (% Abs Ref)
Sample #1     5.1850      (-0.0110)          9.6590      (0.0080)
Sample #2     5.1600      (0.0440)          9.6900      (0.0420)
Sample #3     5.1920      (0.0360)          9.7260      (0.0290)
Sample #4     5.1900      (0.0460)          9.7180      (0.0370)
Avg % Abs     5.1807      (0.0420)          9.7113      (0.0360)
STD DEV       0.0179      (0.0053)          0.0189      (0.0066)
REL STD DEV   0.346      (12.599)          0.195       (18.215)
  -----

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TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-006666
 06/19/2019 15:11:52

Auto Calibration

pg 2 of 2

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<<<<<      3um      >>>>>
-----
Zero Order Coef   -138.23
First Order Coef  2628.80
Second Order Coef  31.82
-----
  Act      Fit      Residual
(g/210L)  (g/210L)  (g/210L)
0.000     0.000    -0.0000
0.040     0.040     0.0003
0.082     0.082    -0.0004
0.151     0.151     0.0002
0.301     0.301    -0.0000
-----
  
```

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<<<<<      9um      >>>>>
-----
Zero Order Coef   -227.69
First Order Coef  1380.31
Second Order Coef  12.29
-----
  Act      Fit      Residual
(g/210L)  (g/210L)  (g/210L)
0.000     -0.000     0.0001
0.040     0.040     0.0001
0.082     0.083    -0.0006
0.151     0.151     0.0005
0.301     0.301    -0.0001
-----
  
```

```

<<<<<      3um      >>>>>
-----
Solution = 0.100 g/210L or 0.4762 mg/l, Samples = 4, Discarded = 1
Sample
Sample #1          4577.00
Sample #2          4538.00
Sample #3          4455.00
Sample #4          4550.00
Avg                4514.3335
STD DEV            51.7333
REL STD DEV        1.146
H2O adjust (mg/l*10k) 247
  
```

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<<<<<      9um      >>>>>
-----
Solution = 0.100 g/210L or 0.4762 mg/l, Samples = 4, Discarded = 1
Sample
Sample #1          4438.00
Sample #2          4402.00
Sample #3          4405.00
Sample #4          4424.00
Avg                4410.3335
STD DEV            11.9304
REL STD DEV        0.271
H2O adjust (mg/l*10k) 351
  
```

Atmospheric Pressure = 949

*****CALIBRATION SUCCESSFUL*****



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

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-006666
Location = TOXL 8164.14.00 09/16
06/19/2019 15:56

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	15:57
02 Std. Sol.	0.014	15:58
03 Room Air	0.000	15:58
04 Std. Sol.	0.014	15:59
05 Room Air	0.000	15:59
06 Std. Sol.	0.014	16:00
07 Room Air	0.000	16:01

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

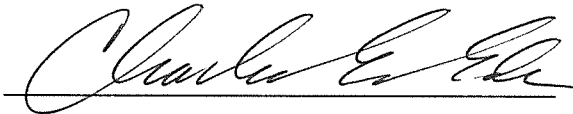
CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-006666
Location = TOXL 8164.14.00 09/16
06/19/2019 16:04

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	16:04
02 Std. Sol.	0.252	16:05
03 Room Air	0.000	16:06
04 Std. Sol.	0.253	16:06
05 Room Air	0.000	16:07
06 Std. Sol.	0.253	16:08
07 Room Air	0.000	16:08

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 AC
0.250 AC

Form 106-I8000

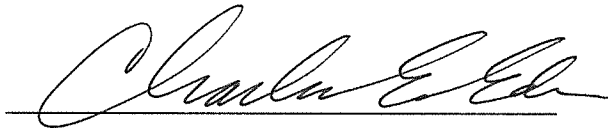
Intoxilyzer Test Record and Checklist
NDOAG Crime Lab. Div., Bismarck, ND 58501

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-006666
Location = TOXL 8164.14.00 09/16
06/19/2019 16:11

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	16:11
02 Std. Gas	0.079	16:11
03 Room Air	0.000	16:12
04 Std. Gas	0.079	16:12
05 Room Air	0.000	16:13
06 Std. Gas	0.080	16:13
07 Room Air	0.000	16:14

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 80-006666
Location = TOXL 8164.14.00 09/16
06/19/2019 16:14

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	16:15
02 Std. Gas	0.079	16:15
03 Room Air	0.000	16:16
04 Std. Gas	0.079	16:16
05 Room Air	0.000	16:17
06 Std. Gas	0.079	16:17
07 Room Air	0.000	16:17

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 80-006666
Location = TOXL 8164.14.00 09/16
06/19/2019 16:18

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	16:18
02 Std. Gas	0.079	16:19
03 Room Air	0.000	16:19
04 Std. Gas	0.079	16:20
05 Room Air	0.000	16:20
06 Std. Gas	0.079	16:20
07 Room Air	0.000	16:21

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