

INTOXILYZER® 8000 CALIBRATION ADJUSTMENT

Intoxilyzer® 8000 Serial Number: 80-004943 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 ≥ 0.99000
 5. Flow Sensor Calibration Verification (Level 3,D,F)
 - a. 10 L/min: 0. 164 L/S X 60 Sec/min = 9.84 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: 713 psi Regulator: 725 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	DR7111
2	0.040	20060	2-10-22	DR7347
3	0.080	19100	3-26-21	DR5114
4	0.150	20150	3-16-22	DR5131
5	0.300 (0.298)	20030	1-21-22	DR7346

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. 924 mbar Displayed by Intoxilyzer® 8000
 - b. 943 mbar Adjusted to using barometer
 - c. 943 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>4337</u>	+	<u>424</u>	=	<u>4761</u>
9 μm	<u>4342</u>	+	<u>419</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: 0.020 AC
Sim. SN: MP3061 Lot No.: 201810D Exp. Date: 10.24.20
 - ii. High AC Known Value ≥ 0.25 AC: 0.250 AC
Sim. SN: MP3067 Lot No.: 201911B Exp. Date: 11.5.21
 - b. Dry Calibration Check: Known Value 0.08 AC
Lot No. 13518080 A6 Cyl No. 33 Exp. Date: 8.5.20
Test 1 0.079 AC Test 4 0.080 AC Test 7 0.081 AC
Test 2 0.080 AC Test 5 0.080 AC Test 8 0.080 AC
Test 3 0.080 AC Test 6 0.080 AC Test 9 0.081 AC
Average 0.080 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: ATMOSPHERIC MONITOR READING 924 mbar
when actual READING IS 944 mbar, REPLACED SIMULATOR
RETURN O-RING.

Instrument is acceptable to be used in the field.

Charles E. Ed
Breath Analyst Signature

4/7/2020
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 80-004943
Location = TOXL 8164.14.00 09/16
04/06/2020 16:02

Flow Rate Calibration*****

1: Rate (Liters/min) = 5
 SQRT(Diff)) = 7.277
2: Rate (Liters/min) = 15
 SQRT(Diff)) = 12.000
3: Rate (Liters/min) = 30
 SQRT(Diff)) = 21.445

Dependent Data Scale Factor = 100000 L/min

Independent Data Scale Factor = 256

Rounded Slope = 679

Rounded Intercept = -694345

Correlation = 0.99718



TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-004943
 04/06/2020 16:07:23

Auto Calibration

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  <<<<<      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 0.0720      (0.0140)      0.1560      (0.0050)
  Sample #2 0.1070      (0.0730)      0.1670      (0.0280)
  Sample #3 0.0550      (0.1350)      0.1300      (0.0500)
  Sample #4 0.0910      (0.1510)      0.1820      (0.0450)
  Avg % Abs 0.0843      (0.1197)      0.1597      (0.0410)
  STD DEV   0.0266      (0.0412)      0.0268      (0.0115)
  REL STD DEV 31.581      (34.428)      16.763      (28.128)
  
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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 0.8390      (-0.0260)      1.5740      (-0.0150)
  Sample #2 0.8330      (0.0150)      1.5650      (0.0040)
  Sample #3 0.8480      (0.0020)      1.5780      (0.0120)
  Sample #4 0.8480      (0.0150)      1.5680      (0.0010)
  Avg % Abs 0.8430      (0.0107)      1.5703      (0.0057)
  STD DEV   0.0087      (0.0075)      0.0068      (0.0057)
  REL STD DEV 1.027      (70.365)      0.433      (100.345)
  
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  -----
  Solution = 0.080 g/210L or 0.3810 mg/l, Samples = 4, Discarded = 1
  Sample   % Abs      (% Abs Ref)      % Abs      (% Abs Ref)
  Sample #1 1.5740      (-0.0370)      2.9770      (0.0010)
  Sample #2 1.5870      (-0.0310)      2.9730      (-0.0030)
  Sample #3 1.5430      (-0.0030)      2.9630      (0.0090)
  Sample #4 1.5960      (-0.0250)      2.9920      (0.0090)
  Avg % Abs 1.5753      (-0.0197)      2.9760      (0.0050)
  STD DEV   0.0284      (0.0147)      0.0147      (0.0069)
  REL STD DEV 1.800      (74.960)      0.495      (138.564)
  
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  -----
  Solution = 0.150 g/210L or 0.7143 mg/l, Samples = 4, Discarded = 1
  Sample   % Abs      (% Abs Ref)      % Abs      (% Abs Ref)
  Sample #1 2.8810      (-0.0270)      5.2980      (0.0000)
  Sample #2 2.8150      (0.0210)      5.2770      (0.0290)
  Sample #3 2.8460      (0.0160)      5.2880      (0.0310)
  Sample #4 2.8430      (0.0250)      5.2760      (0.0300)
  Avg % Abs 2.8347      (0.0207)      5.2803      (0.0300)
  STD DEV   0.0171      (0.0045)      0.0067      (0.0010)
  REL STD DEV 0.603      (21.819)      0.126      (3.333)
  
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  -----
  Solution = 0.298 g/210L or 1.4190 mg/l, Samples = 4, Discarded = 1
  Sample   % Abs      (% Abs Ref)      % Abs      (% Abs Ref)
  Sample #1 5.4460      (0.0000)      9.9160      (0.0010)
  Sample #2 5.4890      (0.0010)      9.9290      (0.0290)
  Sample #3 5.4810      (0.0120)      9.9410      (0.0360)
  Sample #4 5.4940      (0.0070)      9.9490      (0.0230)
  Avg % Abs 5.4880      (0.0067)      9.9397      (0.0293)
  STD DEV   0.0066      (0.0055)      0.0101      (0.0065)
  REL STD DEV 0.119      (82.614)      0.101      (22.181)
  
```

TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-004943
 04/06/2020 16:07:23

Auto Calibration

pg 2 of 2

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<<<<<      3um      >>>>>
-----
Zero Order Coef   -236.01
First Order Coef  2557.15
Second Order Coef 13.19
-----
Act      Fit      Residual
(g/210L) (g/210L)  (g/210L)
0.000    -0.000    0.0004
0.040    0.041    -0.0005
0.080    0.080    -0.0003
0.150    0.149    0.0005
0.298    0.298    -0.0001
-----
  
```

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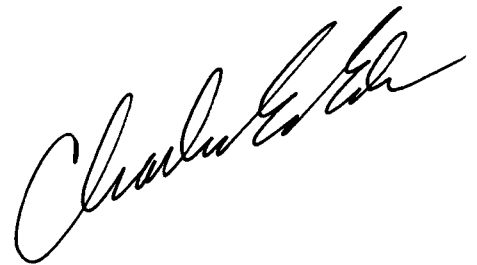
<<<<<      9um      >>>>>
-----
Zero Order Coef   -213.77
First Order Coef  1322.79
Second Order Coef 12.74
-----
Act      Fit      Residual
(g/210L) (g/210L)  (g/210L)
0.000    -0.000    0.0000
0.040    0.040    0.0002
0.080    0.081    -0.0005
0.150    0.150    0.0003
0.298    0.298    -0.0001
-----
  
```

```

<<<<<      3um      >>>>>
-----
Solution = 0.100 g/210L or 0.4762 mg/l, Samples = 4, Discarded = 1
Sample
Sample #1          4406.00          4348.00
Sample #2          4380.00          4342.00
Sample #3          4299.00          4357.00
Sample #4          4334.00          4329.00
Avg                4337.6665          4342.6665
STD DEV            40.6243           14.0119
REL STD DEV        0.937           0.323
H2O adjust (mg/l*10k) 424           419
  
```

Atmospheric Pressure = 943

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



TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-004943
 04/06/2020 16:07:23

Auto Calibration
 Max Power Res Value = 28
 Auto Range Res Value = 12

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

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-004943
Location = TOXL 8164.14.00 09/16
04/06/2020 16:48

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	16:49
02 Std. Sol.	0.018	16:50
03 Room Air	0.000	16:50
04 Std. Sol.	0.019	16:51
05 Room Air	0.000	16:51
06 Std. Sol.	0.019	16:52
07 Room Air	0.000	16:53

08 Sim Temp = 34.0°C

Simul Ser No = MP3061
Std Sol No = 201810D
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 80-004943
Location = TOXL 8164.14.00 09/16
04/06/2020 16:54

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	16:55
02 Std. Sol.	0.253	16:56
03 Room Air	0.000	16:57
04 Std. Sol.	0.253	16:57
05 Room Air	0.000	16:58
06 Std. Sol.	0.254	16:58
07 Room Air	0.000	16:59

08 Sim Temp = 34.0°C

Simul Ser No = MP3067
Std Sol No = 201911B
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 80-004943
Location = TOXL 8164.14.00 09/16
04/07/2020 09:09

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	09:10
02 Std. Gas	0.079	09:10
03 Room Air	0.000	09:10
04 Std. Gas	0.080	09:11
05 Room Air	0.000	09:11
06 Std. Gas	0.080	09:12
07 Room Air	0.000	09:12

Lot No = 13518080A6
Cyl No = 33
Exp Date = 08/05/2020
County = 08 Oper No. = 666666


Operator Signature
CHARLES EDER

Remarks: CALIBRATION CHECK
0.080 AC

Form 106-I8000

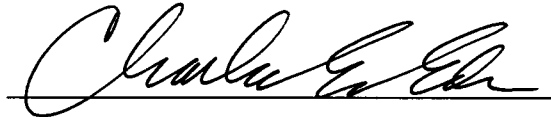
Intoxilyzer Test Record and Checklist
NDOAG Crime Lab. Div., Bismarck, ND 58501

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-004943
Location = TOXL 8164.14.00 09/16
04/07/2020 09:13

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	09:14
02 Std. Gas	0.080	09:14
03 Room Air	0.000	09:14
04 Std. Gas	0.080	09:15
05 Room Air	0.000	09:15
06 Std. Gas	0.080	09:16
07 Room Air	0.000	09:16

Lot No = 13518080A6
Cyl No = 33
Exp Date = 08/05/2020
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks:

CALIBRATION CHECK
0.080 AC

Form 106-I8000

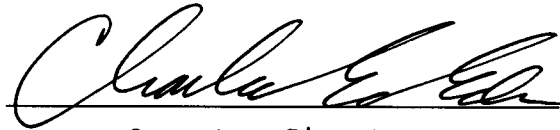
Intoxilyzer Test Record and Checklist
NDOAG Crime Lab. Div., Bismarck, ND 58501

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-004943
Location = TOXL 8164.14.00 09/16
04/07/2020 09:16

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	09:17
02 Std. Gas	0.081	09:17
03 Room Air	0.000	09:18
04 Std. Gas	0.080	09:18
05 Room Air	0.000	09:19
06 Std. Gas	0.081	09:19
07 Room Air	0.000	09:20

Lot No = 13518080A6
Cyl No = 33
Exp Date = 08/05/2020
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks:

CALIBRATION CHECK
0.080 AC

Form 106-I8000