

INTOXILYZER® 8000 CALIBRATION ADJUSTMENT

Intoxilyzer® 8000 Serial Number: 80-005358

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. 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: 974 psi Regulator: 975 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	NA – MilliQ H ₂ O	NA – MilliQ H ₂ O	MP 3066
2	0.040	201808D	8.22.20	MP 3067
3	0.080	201707E	7.25.19	MP 3068
4	0.150	201811E	11.26.20	MP 3069
5	0.300	201803H	3.22.20	MP 3070

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. 938 mbar Displayed by Intoxilyzer® 8000
 - b. 962 mbar Adjusted to using barometer
 - c. 961 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>4488</u>	+	<u>273</u>	=	<u>4761</u>
9 μm	<u>4387</u>	+	<u>374</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: 0.300 AC
Sim. SN: DR7089 Lot No.: 17350 Exp. Date: 10.11.19

b. Dry Calibration Check: Known Value 0.08 AC

Lot No. 34418080A2 Cyl No. 45 Exp. Date: 2.5.21

Test 1 0.080 AC Test 4 0.080 AC Test 7 0.080 AC

Test 2 0.079 AC Test 5 0.079 AC Test 8 0.080 AC

Test 3 0.080 AC Test 6 0.079 AC Test 9 0.079 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: REPLACED EXTERNAL BATTERY,
TIME & DATE RESET,
CALIBRATION ADJUSTMENT DUE TO 0.020 AC STANDARD
READING 0.016 AC, STILL WITHIN ± 0.005 TOLERANCE

Instrument is acceptable to be used in the field.


Breath Analyst Signature

6/10/2019
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 80-005358
Location = TOXL 8164.14.00 09/16
06/04/2019 13:14

10
CEE

Flow Rate Calibration*****
1: Rate (Liters/min) = 5
 SQRT(Diff)) = 4.121
2: Rate (Liters/min) = 15
 SQRT(Diff)) = 9.219
3: Rate (Liters/min) = 30
 SQRT(Diff)) = 20.855
Dependent Data Scale Factor = 100000 L/min
Independent Data Scale Factor = 256
Rounded Slope = 570
Rounded Intercept = 4079
Correlation = 0.99429

FLOW SENSOR CALIBRATION

Charles E. Ed

6/10/2019

TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-005358
 06/04/2019 13:29:55
 10 CEE
 Auto Calibration

pg 1 of 2

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<<<<<      3um      >>>>>          <<<<<      9um      >>>>>
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Solution = 0.000 g/210L or 0.0000 mg/l, Samples = 4, Discarded = 1
  Sample      % Abs      (% Abs Ref)      % Abs      (% Abs Ref)
Sample #1     0.0870      (-0.0090)        0.1360      (-0.0130)
Sample #2     0.0770      (0.0090)         0.1880      (-0.0110)
Sample #3     0.0800      (0.0370)         0.1580      (-0.0120)
Sample #4     0.0450      (0.0850)         0.1700      (0.0000)
Avg % Abs     0.0673      (0.0437)         0.1720      (-0.0077)
STD DEV       0.0194      (0.0384)         0.0151      (0.0067)
REL STD DEV   28.811      (88.022)         8.779       (86.848)
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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     0.7330      (0.0070)         1.4380      (0.0090)
Sample #2     0.7530      (0.0360)         1.4660      (-0.0060)
Sample #3     0.7520      (0.0350)         1.4660      (0.0040)
Sample #4     0.7710      (0.0370)         1.4460      (0.0140)
Avg % Abs     0.7587      (0.0360)         1.4593      (0.0040)
STD DEV       0.0107      (0.0010)         0.0115      (0.0100)
REL STD DEV   1.409       (2.778)          0.791       (250.000)
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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     1.4600      (-0.0150)        2.7840      (0.0000)
Sample #2     1.4820      (-0.0060)        2.8040      (0.0090)
Sample #3     1.4820      (-0.0140)        2.8030      (0.0120)
Sample #4     1.4190      (0.0230)         2.7680      (0.0220)
Avg % Abs     1.4610      (0.0010)         2.7917      (0.0143)
STD DEV       0.0364      (0.0195)         0.0205      (0.0068)
REL STD DEV   2.490       (1946.793)       0.734       (47.490)
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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     2.6030      (-0.0380)        4.9130      (0.0220)
Sample #2     2.5750      (0.0060)         4.9010      (0.0450)
Sample #3     2.6250      (-0.0070)        4.9180      (0.0380)
Sample #4     2.5960      (0.0270)         4.9070      (0.0640)
Avg % Abs     2.5987      (0.0087)         4.9087      (0.0490)
STD DEV       0.0251      (0.0172)         0.0086      (0.0135)
REL STD DEV   0.966       (197.956)       0.176       (27.456)
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Solution = 0.300 g/210L or 1.4286 mg/l, Samples = 4, Discarded = 1
  Sample      % Abs      (% Abs Ref)      % Abs      (% Abs Ref)
Sample #1     5.0540      (0.0120)         9.3570      (0.0280)
Sample #2     5.0330      (0.0410)         9.3470      (0.0490)
Sample #3     5.0250      (0.0570)         9.3150      (0.0760)
Sample #4     5.0240      (0.0470)         9.3530      (0.0610)
Avg % Abs     5.0273      (0.0483)         9.3383      (0.0620)
STD DEV       0.0049      (0.0081)         0.0204      (0.0135)
REL STD DEV   0.098       (16.723)         0.219       (21.819)
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TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-005358
 06/04/2019 13:29:55

Auto Calibration

pg 2 of 2

<<<<< 3um >>>>>

 Zero Order Coef -194.71
 First Order Coef 2732.37
 Second Order Coef 29.65

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

 -246.52
 1435.82
 12.93

Act (g/210L)	Fit (g/210L)	Residual (g/210L)
0.000	-0.000	0.0002
0.040	0.040	0.0002
0.080	0.081	-0.0011
0.150	0.149	0.0008
0.300	0.300	-0.0001

Act (g/210L)	Fit (g/210L)	Residual (g/210L)
0.000	0.000	-0.0000
0.040	0.039	0.0006
0.080	0.081	-0.0011
0.150	0.149	0.0006
0.300	0.300	-0.0001

<<<<< 3um >>>>> <<<<< 9um >>>>>

 Solution = 0.100 g/210L or 0.4762 mg/l, Samples = 4, Discarded = 1

Sample	3um	9um
Sample #1	4551.00	4417.00
Sample #2	4501.00	4375.00
Sample #3	4516.00	4380.00
Sample #4	4447.00	4407.00
Avg	4488.0000	4387.3335
STD DEV	36.2905	17.2143
REL STD DEV	0.809	0.392
H2O adjust (mg/l*10k)	273	374

Atmospheric Pressure = 961

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

TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-005358
 06/04/2019 13:29:55

Auto Calibration
 Max Power Res Value = 27
 Auto Range Res Value = 15

Charles E. Ed
 CALIBRATION ADJUST

6/10/19

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

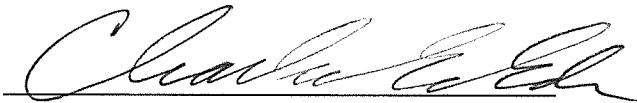
CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-005358
Location = TOXL 8164.14.00 09/16
06/10/2019 14:23

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	14:24
02 Std. Sol.	0.014	14:24
03 Room Air	0.000	14:25
04 Std. Sol.	0.014	14:26
05 Room Air	0.000	14:26
06 Std. Sol.	0.014	14:27
07 Room Air	0.000	14:27

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 80-005358
Location = TOXL 8164.14.00 09/16
06/10/2019 14:29

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	14:29
02 Std. Sol.	0.299	14:30
03 Room Air	0.000	14:31
04 Std. Sol.	0.299	14:32
05 Room Air	0.000	14:32
06 Std. Sol.	0.301	14:33
07 Room Air	0.000	14:34

08 Sim Temp = 34.0°C

Simul Ser No = DR7089
Std Sol No = 17350
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks: HIGH AC
0.300 AC

Form 106-I8000

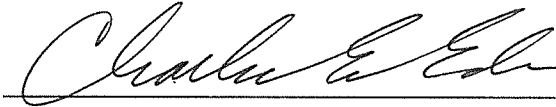
Intoxilyzer Test Record and Checklist
NDOAG Crime Lab. Div., Bismarck, ND 58501

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-005358
Location = TOXL 8164.14.00 09/16
06/10/2019 14:37

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	14:37
02 Std. Gas	0.080	14:38
03 Room Air	0.000	14:38
04 Std. Gas	0.079	14:39
05 Room Air	0.000	14:39
06 Std. Gas	0.080	14:40
07 Room Air	0.000	14:40

Lot No = 34418080A2
Cyl No = 45
Exp Date = 02/05/2021
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 80-005358
Location = TOXL 8164.14.00 09/16
06/10/2019 14:40

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	14:41
02 Std. Gas	0.080	14:41
03 Room Air	0.000	14:42
04 Std. Gas	0.079	14:42
05 Room Air	0.000	14:43
06 Std. Gas	0.079	14:43
07 Room Air	0.000	14:44

Lot No = 34418080A2
Cyl No = 45
Exp Date = 02/05/2021
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks: CALIBRATION CHECK
0.080 AC

Form 106-I8000

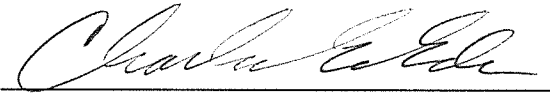
Intoxilyzer Test Record and Checklist
NDOAG Crime Lab. Div., Bismarck, ND 58501

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-005358
Location = TOXL 8164.14.00 09/16
06/10/2019 14:44

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	14:44
02 Std. Gas	0.080	14:45
03 Room Air	0.000	14:45
04 Std. Gas	0.080	14:46
05 Room Air	0.000	14:46
06 Std. Gas	0.079	14:47
07 Room Air	0.000	14:47

Lot No = 34418080A2
Cyl No = 45
Exp Date = 02/05/2021
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks:

CALIBRATION CHECK
0.080 AC

Form 106-I8000