

INTOXILYZER® 8000 CALIBRATION ADJUSTMENT

Intoxilyzer® 8000 Serial Number: 80-004196

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: 55260 & 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. 156 L/S X 60 Sec/min = 9.36 L/min
    - b. 20 L/min: 0. 320 L/S X 60 Sec/min = 19.20 L/min
    - c.  Flow Rates within  $\pm 1$  L/min of Expected Value
- B. Gas Tank Sensor Check (Level 3,D,G)
1. Display: 395 psi Regulator: 400 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	DR 7111
2	0.040 (0.040)	201808D	08.22.20	DR 7347
3	0.080 (0.081)	201807C	07.25.20	DR 5114
4	0.150 (0.151)	201811E	11.26.20	DR 5131
5	0.300 (0.298)	19010	1.3.21	DR 7346

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. 952 mbar Displayed by Intoxilyzer® 8000
  - b. 963 mbar Adjusted to using barometer
  - c. 963 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  $\mu\text{m}$  and 9  $\mu\text{m}$  channels
  - d.  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>4348</u>	+	<u>413</u>	=		<u>4761</u>
9 $\mu\text{m}$	<u>4459</u>	+	<u>302</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  
 Sim. SN: MP3061 Lot No.: 201810D Exp. Date: 10.24.20
    - ii. High AC Known Value  $\geq 0.25$  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. 13518080A6 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 0.081 AC    Test 9 0.081 AC  
 Average 0.080 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: CALIBRATION ADJUST DUE TO ATMOSPHERIC MONITOR READING 952, ACTUAL ATMOSPHERIC PRESSURE 963 mbar  
mbar

Instrument is acceptable to be used in the field.

*[Signature]*  
 Breath Analyst Signature

4.16.20  
 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 80-004196  
Location = TOXL                    8164.14.00 09/16  
04/15/2020                            16:01

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

1: Rate (Liters/min) = 5  
   SQRT(Diff)) = 7.277  
2: Rate (Liters/min) = 15  
   SQRT(Diff)) = 12.609  
3: Rate (Liters/min) = 30  
   SQRT(Diff)) = 22.043

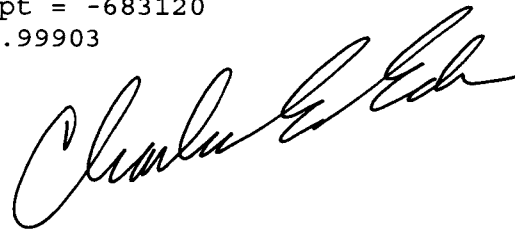
Dependent Data Scale Factor = 100000 L/min

Independent Data Scale Factor = 256

Rounded Slope = 657

Rounded Intercept = -683120

Correlation = 0.99903



TOXL  
 Intoxilyzer - Alcohol Analyzer  
 Model 8000 SN 80-004196  
 04/16/2020 09:13:20

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)		% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		
Sample #1	0.1440	(-0.0110)		0.2470	(-0.0090)		0.1840	(0.0070)		0.1750	(0.0210)		
Sample #2	0.1430	(0.0230)		0.1840	(0.0070)		0.1670	(0.0190)		0.1753	(0.0157)		
Sample #3	0.1190	(0.0390)		0.1670	(0.0190)		0.0085	(0.0076)		4.851	(48.331)		
Sample #4	0.0970	(0.0830)		0.0085	(0.0076)								
Avg % Abs	0.1197	(0.0483)		0.1753	(0.0157)								
STD DEV	0.0230	(0.0311)		0.0085	(0.0076)								
REL STD DEV	19.226	(64.282)		4.851	(48.331)								
-----													
Solution = 0.040 g/210L or 0.1905 mg/l, Samples = 4, Discarded = 1													
Sample	% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		
Sample #1	0.9190	(-0.0010)		1.6210	(-0.0100)		1.6130	(0.0000)		1.6570	(0.0000)		
Sample #2	0.8320	(0.0710)		1.6130	(0.0000)		1.6260	(0.0010)		1.6320	(0.0003)		
Sample #3	0.8570	(0.0690)		1.6570	(0.0000)		0.0226	(0.0006)		1.385	(173.205)		
Sample #4	0.8300	(0.0900)		1.6260	(0.0010)								
Avg % Abs	0.8397	(0.0767)		1.6320	(0.0003)								
STD DEV	0.0150	(0.0116)		0.0226	(0.0006)								
REL STD DEV	1.792	(15.118)		1.385	(173.205)								
-----													
Solution = 0.081 g/210L or 0.3857 mg/l, Samples = 4, Discarded = 1													
Sample	% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		
Sample #1	1.6100	(0.0150)		2.9970	(0.0080)		3.0170	(0.0200)		3.0010	(0.0250)		
Sample #2	1.5660	(0.0700)		3.0170	(0.0200)		3.0220	(0.0040)		3.0133	(0.0163)		
Sample #3	1.5140	(0.0990)		3.0010	(0.0250)		0.0110	(0.0110)		0.364	(67.161)		
Sample #4	1.5610	(0.0890)		3.0220	(0.0040)								
Avg % Abs	1.5470	(0.0860)		3.0133	(0.0163)								
STD DEV	0.0287	(0.0147)		0.0110	(0.0110)								
REL STD DEV	1.854	(17.129)		0.364	(67.161)								
-----													
Solution = 0.151 g/210L or 0.7190 mg/l, Samples = 4, Discarded = 1													
Sample	% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		
Sample #1	2.7870	(0.0370)		5.3420	(-0.0170)		5.3460	(-0.0070)		5.3260	(0.0100)		
Sample #2	2.7520	(0.0870)		5.3460	(-0.0070)		5.3360	(0.0170)		5.3360	(0.0067)		
Sample #3	2.7060	(0.1160)		5.3260	(0.0100)		0.0100	(0.0123)		0.187	(185.135)		
Sample #4	2.7420	(0.0910)		5.3360	(0.0170)								
Avg % Abs	2.7333	(0.0980)		5.3360	(0.0067)								
STD DEV	0.0242	(0.0157)		0.0100	(0.0123)								
REL STD DEV	0.885	(16.037)		0.187	(185.135)								
-----													
Solution = 0.298 g/210L or 1.4190 mg/l, Samples = 4, Discarded = 1													
Sample	% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		% Abs	(% Abs Ref)		
Sample #1	5.2420	(-0.0150)		10.1120	(-0.0180)		10.1290	(0.0050)		10.0870	(0.0400)		
Sample #2	5.2840	(-0.0180)		10.1290	(0.0050)		10.0800	(0.0210)		10.0987	(0.0220)		
Sample #3	5.2120	(0.0150)		10.0870	(0.0400)		0.0265	(0.0175)		0.262	(79.643)		
Sample #4	5.2360	(0.0210)		10.0800	(0.0210)								
Avg % Abs	5.2440	(0.0060)		10.0987	(0.0220)								
STD DEV	0.0367	(0.0210)		0.0265	(0.0175)								
REL STD DEV	0.699	(350.000)		0.262	(79.643)								
-----													

TOXL  
 Intoxilyzer - Alcohol Analyzer  
 Model 8000 SN 80-004196  
 04/16/2020 09:13:20

Auto Calibration

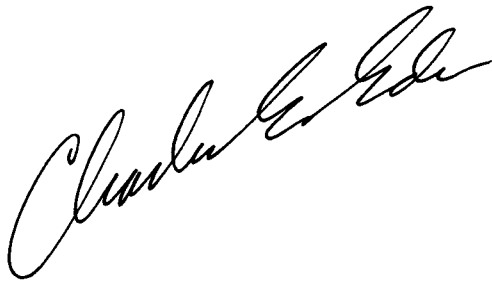
pg 2 of 2

<<<<< 3um >>>>>			<<<<< 9um >>>>>		
-----			-----		
Zero Order Coef	-352.75		Zero Order Coef	-268.30	
First Order Coef	2718.52		First Order Coef	1346.58	
Second Order Coef	10.67		Second Order Coef	8.49	
-----			-----		
Act	Fit	Residual	Act	Fit	Residual
(g/210L)	(g/210L)	(g/210L)	(g/210L)	(g/210L)	(g/210L)
0.000	-0.001	0.0006	0.000	-0.001	0.0007
0.040	0.041	-0.0007	0.040	0.041	-0.0010
0.081	0.081	-0.0004	0.081	0.081	-0.0002
0.151	0.150	0.0007	0.151	0.150	0.0007
0.298	0.298	-0.0001	0.298	0.298	-0.0001
-----			-----		

<<<<< 3um >>>>>			<<<<< 9um >>>>>		
-----			-----		
Solution = 0.100 g/210L or 0.4762 mg/l, Samples = 4, Discarded = 1					
Sample					
Sample #1		4421.00		4439.00	
Sample #2		4357.00		4450.00	
Sample #3		4329.00		4461.00	
Sample #4		4360.00		4467.00	
Avg		4348.6665		4459.3335	
STD DEV		17.0978		8.6217	
REL STD DEV		0.393		0.193	
H2O adjust (mg/l*10k)		413		302	

Atmospheric Pressure = 963

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



TOXL  
 Intoxilyzer - Alcohol Analyzer  
 Model 8000 SN 80-004196  
 04/16/2020 09:13:20

Auto Calibration  
 Max Power Res Value = 24  
 Auto Range Res Value = 17

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

CMI, Inc. Intoxilyzer      Alcohol Analyzer  
North Dakota Model 8000      SN 80-004196  
Location = TOXL      8164.14.00 09/16  
04/16/2020      09:55

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	09:56
02 Std. Sol.	0.019	09:57
03 Room Air	0.000	09:57
04 Std. Sol.	0.019	09:58
05 Room Air	0.000	09:58
06 Std. Sol.	0.020	09:59
07 Room Air	0.000	10:00

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 80-004196  
Location = TOXL      8164.14.00 09/16  
04/16/2020      10:02

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	10:03
02 Std. Sol.	0.248	10:03
03 Room Air	0.000	10:04
04 Std. Sol.	0.249	10:05
05 Room Air	0.000	10:05
06 Std. Sol.	0.250	10:06
07 Room Air	0.000	10:07

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 80-004196  
Location = TOXL      8164.14.00 09/16  
04/16/2020      10:12

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	10:13
02 Std. Gas	0.079	10:13
03 Room Air	0.000	10:14
04 Std. Gas	0.080	10:14
05 Room Air	0.000	10:15
06 Std. Gas	0.080	10:15
07 Room Air	0.000	10:15

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 80-004196  
Location = TOXL      8164.14.00 09/16  
04/16/2020      10:16

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	10:17
02 Std. Gas	0.080	10:17
03 Room Air	0.000	10:18
04 Std. Gas	0.080	10:18
05 Room Air	0.000	10:18
06 Std. Gas	0.081	10:19
07 Room Air	0.000	10:19

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 80-004196  
Location = TOXL      8164.14.00 09/16  
04/16/2020      10:20

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	10:20
02 Std. Gas	0.081	10:21
03 Room Air	0.000	10:21
04 Std. Gas	0.080	10:22
05 Room Air	0.000	10:22
06 Std. Gas	0.081	10:22
07 Room Air	0.000	10:23

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