



## **Breath Alcohol Simulator Solution Analysis No. 18-568 Summary Report**

---

Each sample pack consisted of two bottles of solution which participants were requested to analyze. Data were returned from 55 participants and are compiled into the following tables:

	<u>Page</u>
<a href="#"><u>Manufacturer's Information</u></a>	<u>2</u>
<a href="#"><u>Summary Comments</u></a>	<u>3</u>
<a href="#"><u>Table 1: Breath Alcohol Results</u></a>	<u>4</u>
<a href="#"><u>Table 2: Additional Comments</u></a>	<u>20</u>
<a href="#"><u>Appendix: Data Sheet</u></a>	<u>21</u>

This report contains the data received from the participants in this test. Since these participants are located in many countries around the world, and it is their option how the samples are to be used (e.g., training exercise, known or blind proficiency testing, research and development of new techniques, etc.), the results compiled in the Summary Report are not intended to be an overview of the quality of work performed in the profession and cannot be interpreted as such. The Summary Comments are included for the benefit of participants to assist with maintaining or enhancing the quality of their results. These comments are not intended to reflect the general state of the art within the profession.

## Manufacturer's Information

Each sample pack consisted of two 500mL bottles of solution each with a different alcohol concentration. Participants were requested to analyze each item and report the resultant Breath Alcohol Concentration (BrAC).

ITEMS 1 and 2 (PREPARATION): Sample preparation consisted of combining a predetermined volume of ethanol and DI water. Each solution was mixed and left to equilibrate before being sent for predistribution testing.

SAMPLE SET ASSEMBLY: Once predistribution results were received, the samples were then dispensed into pre-labeled sample bottles. A sample pack was prepared containing an Item 1 and 2.

VERIFICATION: Laboratories that conducted predistribution analysis of the samples reported consistent results that were comparable to the preparation Breath Alcohol Concentrations.

<u>Item</u>	<u>Preparation BrAC (g/210L)</u>
1	0.34
2	0.10

Please note that the Preparation BrAC is the value used for calculations during the test preparation phase and may not necessarily represent the final concentration of the samples. It is advised to wait for the Grand Mean statistics available in the Summary and Individual Reports before evaluating performance.

## **Summary Comments**

This test was designed to allow participants to assess their proficiency in the analysis of breath alcohol simulator solutions. Each participant was supplied with a sample set consisting of two 500mL bottles of solution which contained different breath alcohol concentration (BrAC) values. (Refer to Manufacturer's Information for production details.)

Table 1 is separated by item number and port used. Some participants reported both IR and EC results; thus the number of entries in the table summaries may not be the same as the number of participants. Out of 55 total participants, 48 (87.3%) participants reported results utilizing the Calibration Port and 34 (61.8%) participants reported results utilizing the Breath Port.

The grand mean and standard deviation were calculated utilizing the raw data for each Item. They are provided to assist participants in determining the acceptability of the results per their laboratory policies. Participants with "extreme" data ( $\pm 5$  STD from grand mean) have been marked with an "X" and their results were excluded from the calculations of the grand mean and standard deviation. One participant reported "extreme" data for Items 1 and 2 using both the Calibration Port and Breath Port. Based on the results reported by this participant, it appears that he or she may have switched the items at some point in the testing or reporting process. A second participant reported "extreme" data for Items 1 and 2 using the Breath Port. This participant appears to have reported results in units other than g/210L.

CTS noted many participants reported their instrument's serial numbers. For the sake of anonymity, CTS did not reproduce this information in the report.

## Breath Alcohol Results

Report 9 consecutive readings from your Breath Test Instrument to three decimal places in grams per 210 liters.

TABLE 1- Item 1 - Calibration Port

WebCode	Preparation Target BrAC: 0.34 g/210L									Mean
2FPYM6	EC									
		0.3360	0.3360	0.3370	0.3360	0.3370	0.3380	0.3360	0.3360	0.3380
	IR									
		0.3330	0.3320	0.3330	0.3320	0.3320	0.3330	0.3310	0.3320	0.3320
										<b>0.3367</b>
3KYEU9	IR									
		0.3410	0.3390	0.3380	0.3370	0.3370	0.3370	0.3370	0.3370	0.3370
										<b>0.3378</b>
46G78A	IR									
		0.3260	0.3260	0.3270	0.3270	0.3260	0.3270	0.3280	0.3260	0.3260
										<b>0.3266</b>
4DTZNX	EC									
		0.3330	0.3350	0.3340	0.3330	0.3340	0.3320	0.3330	0.3310	0.3320
	IR									
		0.3280	0.3280	0.3280	0.3290	0.3280	0.3280	0.3270	0.3270	0.3260
										<b>0.3330</b>
4MXAT2	EC									
		0.3410	0.3420	0.3430	0.3440	0.3440	0.3440	0.3460	0.3460	0.3460
	IR									
		0.3360	0.3360	0.3360	0.3360	0.3360	0.3350	0.3350	0.3340	0.3350
										<b>0.3440</b>
										<b>0.3354</b>
88VNWW	IR									
		0.3320	0.3320	0.3320	0.3320	0.3320	0.3320	0.3310	0.3310	0.3320
										<b>0.3318</b>
99NVX9	IR									
		0.3350	0.3360	0.3360	0.3370	0.3370	0.3360	0.3370	0.3360	0.3360
										<b>0.3362</b>
9C4MP2	IR									
		0.3380	0.3380	0.3370	0.3390	0.3380	0.3370	0.3370	0.3360	0.3350
										<b>0.3372</b>
9UKQBT	IR									
		0.3310	0.3310	0.3300	0.3310	0.3310	0.3300	0.3300	0.3300	0.3300
										<b>0.3304</b>
9WRZNK	IR									
		0.3140	0.3240	0.3280	0.3310	0.3320	0.3330	0.3330	0.3340	0.3330
										<b>0.3291</b>
AJ3C77	IR									
		0.3310	0.3290	0.3280	0.3280	0.3270	0.3290	0.3280	0.3270	0.3270
										<b>0.3282</b>
B7TDCP	IR									
		0.3300	0.3320	0.3330	0.3320	0.3340	0.3330	0.3340	0.3330	0.3340
										<b>0.3328</b>
BE2PR9	IR									
		0.3420	0.3440	0.3460	0.3450	0.3460	0.3460	0.3470	0.3480	0.3470
										<b>0.3457</b>
BFCPQN	EC									
		0.3290	0.3290	0.3280	0.3270	0.3290	0.3290	0.3310	0.3320	0.3300
	IR									
		0.3270	0.3270	0.3260	0.3250	0.3230	0.3250	0.3250	0.3260	0.3230
										<b>0.3293</b>
										<b>0.3252</b>

TABLE 1- Item 1 - Calibration Port

WebCode	Preparation Target BrAC: 0.34 g/210L									Mean	
BXWHC7	IR	0.3370	0.3360	0.3370	0.3360	0.3360	0.3360	0.3360	0.3360	0.3370	<b>0.3363</b>
C9UECM	EC	0.3340	0.3360	0.3380	0.3390	0.3400	0.3420	0.3420	0.3440	0.3450	<b>0.3400</b>
	IR	0.3370	0.3360	0.3360	0.3370	0.3360	0.3370	0.3370	0.3370	0.3370	<b>0.3367</b>
CJBA8R	IR	0.3090	0.3210	0.3230	0.3220	0.3240	0.3270	0.3250	0.3290	0.3300	<b>0.3233</b>
EJ2AYN	EC	0.0950	0.0930	0.0940	0.0930	0.0930	0.0930	0.0940	0.0930	0.0930	<b>0.0934</b> X
	IR	0.0940	0.0930	0.0930	0.0940	0.0940	0.0940	0.0940	0.0940	0.0940	<b>0.0938</b> X
EQPTNX	IR	0.3350	0.3360	0.3350	0.3340	0.3350	0.3350	0.3340	0.3350	0.3350	<b>0.3349</b>
EYWP8U	IR	0.3360	0.3350	0.3350	0.3350	0.3350	0.3350	0.3340	0.3340	0.3340	<b>0.3348</b>
F23AVU	IR	0.3360	0.3360	0.3350	0.3350	0.3350	0.3350	0.3350	0.3350	0.3350	<b>0.3352</b>
F2JNYX	IR	0.3380	0.3410	0.3390	0.3400	0.3410	0.3400	0.3390	0.3390	0.3400	<b>0.3397</b>
FRCZ97	IR	0.3315	0.3313	0.3307	0.3322	0.3320	0.3322	0.3318	0.3318	0.3307	<b>0.3316</b>
FTQB2J	EC/ IR	0.3410	0.3420	0.3420	0.3420	0.3420	0.3420	0.3410	0.3410	0.3420	<b>0.3417</b>
GCGPB2	IR	0.3290	0.3300	0.3290	0.3290	0.3290	0.3280	0.3290	0.3290	0.3290	<b>0.3290</b>
GEJPBY	IR	0.3310	0.3320	0.3320	0.3320	0.3320	0.3330	0.3320	0.3320	0.3320	<b>0.3320</b>
HD4VWB	IR	0.3300	0.3320	0.3330	0.3350	0.3340	0.3350	0.3350	0.3360	0.3360	<b>0.3340</b>
HYNM9Z	IR	0.3380	0.3380	0.3390	0.3390	0.3390	0.3390	0.3380	0.3380	0.3380	<b>0.3384</b>
K976GP	IR - Intoxilyzer 8000	0.3370	0.3380	0.3390	0.3390	0.3400	0.3390	0.3390	0.3390	0.3380	<b>0.3387</b>
KYFMZV	IR	0.3280	0.3310	0.3300	0.3320	0.3340	0.3340	0.3340	0.3340	0.3350	<b>0.3324</b>
L2ZQAE	IR - CMI Intoxilyzer 8000	0.3170	0.3220	0.3230	0.3240	0.3260	0.3260	0.3260	0.3270	0.3140	<b>0.3228</b>

TABLE 1- Item 1 - Calibration Port

WebCode	Preparation Target BrAC: 0.34 g/210L									Mean	
LL77TQ	IR	0.3340	0.3340	0.3340	0.3330	0.3340	0.3340	0.3330	0.3340	0.3330	<b>0.3337</b>
N7P398	IR	0.3340	0.3340	0.3340	0.3340	0.3340	0.3340	0.3340	0.3340	0.3340	<b>0.3340</b>
P27CAQ	IR	0.3280	0.3290	0.3290	0.3300	0.3300	0.3300	0.3300	0.3290	0.3300	<b>0.3294</b>
PJMFVH	EC	0.3400	0.3410	0.3420	0.3420	0.3430	0.3420	0.3430	0.3430	0.3450	<b>0.3423</b>
	IR	0.3360	0.3370	0.3370	0.3360	0.3370	0.3360	0.3360	0.3360	0.3350	<b>0.3362</b>
Q8P39Q	EC	0.3250	0.3280	0.3280	0.3270	0.3280	0.3280	0.3260	0.3280	0.3280	<b>0.3273</b>
	IR	0.3220	0.3240	0.3250	0.3200	0.3240	0.3240	0.3190	0.3230	0.3230	<b>0.3227</b>
QPRNRC	IR	0.3390	0.3390	0.3390	0.3380	0.3390	0.3390	0.3390	0.3390	0.3390	<b>0.3389</b>
R7EBC	IR	0.3320	0.3320	0.3320	0.3320	0.3320	0.3330	0.3320	0.3320	0.3320	<b>0.3321</b>
RMJLPE	EC	0.3270	0.3270	0.3270	0.3270	0.3260	0.3260	0.3270	0.3270	0.3270	<b>0.3268</b>
	IR	0.3330	0.3330	0.3330	0.3320	0.3330	0.3320	0.3320	0.3320	0.3320	<b>0.3324</b>
RZ67ZA	IR	0.3370	0.3350	0.3360	0.3360	0.3360	0.3360	0.3370	0.3350	0.3360	<b>0.3360</b>
UX9MUD	EC	0.3380	0.3370	0.3390	0.3400	0.3390	0.3400	0.3400	0.3410	0.3410	<b>0.3394</b>
	IR	0.3320	0.3330	0.3330	0.3320	0.3330	0.3330	0.3320	0.3320	0.3320	<b>0.3324</b>
V8FJEB	EC	0.3280	0.3320	0.3340	0.3360	0.3370	0.3380	0.3390	0.3410	0.3410	<b>0.3362</b>
	IR	0.3340	0.3340	0.3350	0.3370	0.3350	0.3400	0.3370	0.3390	0.3380	<b>0.3366</b>
V9L43B	EC	0.3440	0.3420	0.3410	0.3400	0.3400	0.3390	0.3390	0.3390	0.3400	<b>0.3404</b>
	IR	0.3340	0.3340	0.3350	0.3340	0.3350	0.3360	0.3330	0.3340	0.3340	<b>0.3343</b>
WJZKA8	IR	0.3270	0.3280	0.3300	0.3310	0.3310	0.3320	0.3340	0.3340	0.3340	<b>0.3312</b>
XDCXDG	IR	0.3340	0.3350	0.3350	0.3350	0.3350	0.3320	0.3350	0.3330	0.3340	<b>0.3342</b>

TABLE 1- Item 1 - Calibration Port

WebCode	Preparation Target BrAC: 0.34 g/210L									Mean
Y88J77	IR Intoxilyzer model 8000									
	0.3290	0.3290	0.3300	0.3290	0.3290	0.3290	0.3290	0.3280	0.3290	<b>0.3290</b>
YDD3FW	IR									
	0.3280	0.3280	0.3290	0.3300	0.3300	0.3290	0.3320	0.3300	0.3310	<b>0.3297</b>
ZF9KK3	IR									
	0.3280	0.3290	0.3290	0.3290	0.3290	0.3290	0.3290	0.3290	0.3290	<b>0.3289</b>

### Statistical Analysis for Item 1

Grand Mean	0.3335	Number of Entries Included	58
Standard Deviation	0.0052	Number of Entries Excluded	2

Number of entries may add up to more than the total number of participants because participants can report results for multiple methods.

TABLE 1- Item 2 - Calibration Port

WebCode	Preparation Target BrAC: 0.10 g/210L									Mean
2FPYM6	EC									
	0.0960	0.0950	0.0950	0.0950	0.0950	0.0950	0.0950	0.0950	0.0950	<b>0.0951</b>
	IR									
	0.0940	0.0940	0.0940	0.0930	0.0940	0.0940	0.0930	0.0940	0.0940	<b>0.0938</b>
3KYEU9	IR									
	0.0940	0.0940	0.0940	0.0940	0.0940	0.0940	0.0950	0.0940	0.0940	<b>0.0941</b>
46G78A	IR									
	0.0910	0.0910	0.0900	0.0910	0.0910	0.0900	0.0910	0.0910	0.0900	<b>0.0907</b>
4DTZNX	EC									
	0.0950	0.0960	0.0970	0.0950	0.0940	0.0950	0.0930	0.0930	0.0940	<b>0.0947</b>
	IR									
	0.0930	0.0950	0.0940	0.0930	0.0940	0.0940	0.0940	0.0950	0.0930	<b>0.0939</b>
4MXAT2	EC									
	0.0930	0.0950	0.0950	0.0940	0.0950	0.0960	0.0960	0.0960	0.0950	<b>0.0950</b>
	IR									
	0.0930	0.0940	0.0950	0.0940	0.0950	0.0950	0.0940	0.0930	0.0950	<b>0.0942</b>
88VNWW	IR									
	0.0960	0.0960	0.0950	0.0950	0.0960	0.0950	0.0950	0.0950	0.0950	<b>0.0953</b>
99NVX9	IR									
	0.0940	0.0950	0.0950	0.0940	0.0950	0.0950	0.0950	0.0950	0.0950	<b>0.0948</b>
9C4MP2	IR									
	0.0970	0.0970	0.0970	0.0970	0.0970	0.0970	0.0960	0.0960	0.0960	<b>0.0967</b>
9UKQBT	IR									
	0.0920	0.0910	0.0910	0.0910	0.0910	0.0920	0.0910	0.0910	0.0900	<b>0.0911</b>
9WRZNK	IR									
	0.1260	0.1120	0.1070	0.1030	0.1020	0.1010	0.1000	0.0990	0.0980	<b>0.1053</b>
AJ3C77	IR									
	0.0940	0.0940	0.0940	0.0930	0.0940	0.0940	0.0930	0.0930	0.0930	<b>0.0936</b>
B7TDCP	IR									
	0.0930	0.0930	0.0940	0.0940	0.0940	0.0940	0.0940	0.0940	0.0930	<b>0.0937</b>
BE2PR9	IR									
	0.1030	0.1010	0.1010	0.1020	0.1020	0.1010	0.1020	0.1020	0.1030	<b>0.1019</b>
BFCPQN	EC									
	0.0920	0.0930	0.0930	0.0940	0.0940	0.0930	0.0930	0.0930	0.0940	<b>0.0932</b>
	IR									
	0.0930	0.0930	0.0930	0.0930	0.0940	0.0930	0.0930	0.0930	0.0930	<b>0.0931</b>
BXWHC7	IR									
	0.0950	0.0960	0.0960	0.0960	0.0960	0.0960	0.0960	0.0960	0.0960	<b>0.0959</b>



TABLE 1- Item 2 - Calibration Port

WebCode	Preparation Target BrAC: 0.10 g/210L									Mean	
C9UECM	EC	0.0930	0.0930	0.0940	0.0940	0.0940	0.0940	0.0950	0.0940	0.0950	<b>0.0940</b>
	IR	0.0940	0.0940	0.0940	0.0950	0.0940	0.0950	0.0940	0.0940	0.0950	<b>0.0943</b>
CJBA8R	IR	0.0960	0.0960	0.0960	0.0950	0.0960	0.0970	0.0960	0.0960	0.0960	<b>0.0960</b>
EJ2AYN	EC	0.3230	0.3200	0.3210	0.3200	0.3200	0.3190	0.3150	0.3130	0.3190	<b>0.3189 X</b>
	IR	0.3240	0.3270	0.3270	0.3270	0.3240	0.3240	0.3230	0.3240	0.3260	<b>0.3251 X</b>
EQPTNX	IR	0.0950	0.0950	0.0950	0.0940	0.0950	0.0950	0.0950	0.0950	0.0950	<b>0.0949</b>
EYWP8U	IR	0.0960	0.0960	0.0960	0.0960	0.0960	0.0950	0.0960	0.0950	0.0960	<b>0.0958</b>
F23AVU	IR	0.0980	0.0970	0.0980	0.0980	0.0970	0.0970	0.0970	0.0970	0.0970	<b>0.0973</b>
F2JNYX	IR	0.0980	0.0980	0.0980	0.0980	0.0970	0.0970	0.0970	0.0970	0.0970	<b>0.0974</b>
FRCZ97	IR	0.0938	0.0947	0.0942	0.0940	0.0945	0.0942	0.0938	0.0940	0.0940	<b>0.0941</b>
FTQB2J	EC/ IR	0.0900	0.0960	0.0970	0.0970	0.0970	0.0970	0.0970	0.0970	0.0970	<b>0.0961</b>
GCGPB2	IR	0.0980	0.0980	0.0980	0.0980	0.0970	0.0970	0.0970	0.0970	0.0970	<b>0.0974</b>
GEJPBY	IR	0.0930	0.0930	0.0920	0.0930	0.0930	0.0930	0.0930	0.0930	0.0930	<b>0.0929</b>
HD4VWB	IR	0.0950	0.0940	0.0930	0.0940	0.0920	0.0930	0.0930	0.0940	0.0930	<b>0.0934</b>
HYNM9Z	IR	0.0980	0.0960	0.0970	0.0970	0.0960	0.0970	0.0970	0.0970	0.0980	<b>0.0970</b>
K976GP	IR - Intoxilyzer 8000	0.0950	0.0950	0.0950	0.0950	0.0940	0.0940	0.0950	0.0950	0.0940	<b>0.0947</b>
KYFMZV	IR	0.0960	0.0970	0.0960	0.0960	0.0950	0.0960	0.0950	0.0960	0.0960	<b>0.0959</b>
L2ZQAE	IR - CMI Intoxilyzer 8000	0.0910	0.0930	0.0910	0.0920	0.0910	0.0920	0.0920	0.0900	0.0910	<b>0.0914</b>
LL77TQ	IR	0.0940	0.0940	0.0940	0.0940	0.0940	0.0950	0.0940	0.0940	0.0940	<b>0.0941</b>

TABLE 1- Item 2 - Calibration Port

<b>WebCode</b>	<b>Preparation Target BrAC: 0.10 g/210L</b>									<b>Mean</b>	
N7P398	IR	0.0950	0.0950	0.0950	0.0950	0.0950	0.0950	0.0950	0.0950	0.0950	<b>0.0950</b>
P27CAQ	IR	0.0920	0.0920	0.0910	0.0920	0.0920	0.0920	0.0920	0.0910	0.0910	<b>0.0917</b>
PJMFVH	EC	0.0930	0.0940	0.0930	0.0930	0.0940	0.0940	0.0940	0.0940	0.0940	<b>0.0937</b>
	IR	0.0940	0.0940	0.0940	0.0930	0.0940	0.0930	0.0940	0.0940	0.0940	<b>0.0938</b>
Q8P39Q	EC	0.0920	0.0920	0.0920	0.0920	0.0930	0.0930	0.0920	0.0930	0.0930	<b>0.0924</b>
	IR	0.0920	0.0930	0.0930	0.0920	0.0930	0.0940	0.0920	0.0930	0.0930	<b>0.0928</b>
QPRNRC	IR	0.0970	0.0970	0.0970	0.0960	0.0960	0.0970	0.0970	0.0970	0.0970	<b>0.0968</b>
R7EBC	IR	0.0950	0.0950	0.0950	0.0950	0.0950	0.0950	0.0950	0.0950	0.0950	<b>0.0950</b>
RMJLPE	EC	0.0920	0.0930	0.0940	0.0930	0.0930	0.0930	0.0930	0.0930	0.0930	<b>0.0930</b>
	IR	0.0940	0.0940	0.0940	0.0930	0.0940	0.0940	0.0940	0.0940	0.0930	<b>0.0938</b>
RZ67ZA	IR	0.0960	0.0950	0.0950	0.0950	0.0950	0.0950	0.0950	0.0950	0.0950	<b>0.0951</b>
UX9MUD	EC	0.0950	0.0940	0.0950	0.0960	0.0960	0.0950	0.0950	0.0950	0.0950	<b>0.0951</b>
	IR	0.0940	0.0940	0.0940	0.0940	0.0940	0.0930	0.0940	0.0940	0.0940	<b>0.0939</b>
V8FJEB	EC	0.0910	0.0930	0.0930	0.0930	0.0950	0.0950	0.0950	0.0950	0.0950	<b>0.0939</b>
	IR	0.0920	0.0920	0.0960	0.0950	0.0960	0.0950	0.0950	0.0940	0.0950	<b>0.0944</b>
V9L43B	EC	0.0950	0.0930	0.0930	0.0960	0.0950	0.0940	0.0940	0.0940	0.0940	<b>0.0942</b>
	IR	0.0940	0.0940	0.0930	0.0930	0.0930	0.0930	0.0930	0.0930	0.0940	<b>0.0933</b>
WJZKA8	IR	0.0900	0.0930	0.0920	0.0920	0.0930	0.0930	0.0930	0.0940	0.0950	<b>0.0928</b>
XDCXDG	IR	0.0930	0.0940	0.0930	0.0940	0.0940	0.0930	0.0930	0.0920	0.0930	<b>0.0932</b>
Y88J77	IR Intoxilyzer model 8000	0.0940	0.0950	0.0950	0.0940	0.0940	0.0940	0.0940	0.0940	0.0940	<b>0.0942</b>

TABLE 1- Item 2 - Calibration Port

WebCode	Preparation Target BrAC: 0.10 g/210L									Mean	
YDD3FW	IR	0.0930	0.0920	0.0930	0.0930	0.0930	0.0930	0.0940	0.0930	0.0940	<b>0.0931</b>
ZF9KK3	IR	0.0930	0.0920	0.0910	0.0920	0.0920	0.0920	0.0920	0.0920	0.0930	<b>0.0921</b>

Statistical Analysis for Item 2			
Grand Mean	0.0946	Number of Entries Included	58
Standard Deviation	0.0023	Number of Entries Excluded	2

Number of entries may add up to more than the total number of participants because participants can report results for multiple methods.

TABLE 1-Calibration Port Summary Statistics

Response Summary	Calibration Port	
	Item 1	Item 2
<b>Preparation Target BrAC (g/210L):</b>	<b>0.34</b>	<b>0.10</b>
Grand Mean	0.3335	0.0946
Standard Deviation	0.0052	0.0023

TABLE 1- Item 1 - Breath Port

WebCode	Preparation Target BrAC: 0.34 g/210L									Mean
2FPYM6	EC									
	0.3400	0.3400	0.3430	0.3420	0.3410	0.3420	0.3440	0.3430	0.3410	<b>0.3418</b>
	IR									
	0.3270	0.3260	0.3250	0.3250	0.3240	0.3220	0.3230	0.3200	0.3210	<b>0.3237</b>
32ZJYW	IR									
	153.6	153.8	153.7	151.3	153.0	152.6	151.0	152.4	151.7	<b>152.6 X</b>
4DTZNX	EC									
	0.3360	0.3230	0.3350	0.3310	0.3290	0.3320	0.3210	0.3350	0.3350	<b>0.3308</b>
	IR									
	0.3300	0.3240	0.3260	0.3270	0.3290	0.3270	0.3230	0.3260	0.3270	<b>0.3266</b>
4MXAT2	EC									
	0.3410	0.3420	0.3450	0.3420	0.3420	0.3430	0.3420	0.3420	0.3420	<b>0.3423</b>
	IR									
	0.3300	0.3300	0.3290	0.3280	0.3280	0.3270	0.3270	0.3260	0.3250	<b>0.3278</b>
6DV3ZN	IR									
	0.3000	0.3060	0.3050	0.3110	0.3120	0.3110	0.3100	0.3200	0.3220	<b>0.3108</b>
99NVX9	IR									
	0.3250	0.3250	0.3260	0.3260	0.3260	0.3260	0.3260	0.3270	0.3280	<b>0.3261</b>
AAC2JG	IR									
	0.3040	0.3090	0.3100	0.3110	0.3100	0.3120	0.3190	0.3080	0.3150	<b>0.3109</b>
B7TDCP	IR									
	0.3390	0.3390	0.3310	0.3330	0.3300	0.3330	0.3300	0.3300	0.3310	<b>0.3329</b>
BE2PR9	IR									
	0.3460	0.3450	0.3440	0.3460	0.3460	0.3440	0.3430	0.3430	0.3410	<b>0.3442</b>
BFCPQN	EC									
	0.3230	0.3240	0.3260	0.3240	0.3240	0.3250	0.3230	0.3230	0.3250	<b>0.3241</b>
	IR									
	0.3220	0.3200	0.3200	0.3180	0.3180	0.3190	0.3180	0.3170	0.3140	<b>0.3184</b>
BXWHC7	IR									
	0.3410	0.3400	0.3440	0.3400	0.3430	0.3430	0.3430	0.3400	0.3420	<b>0.3418</b>
C9UECM	EC									
	0.3340	0.3350	0.3320	0.3330	0.3360	0.3370	0.3360	0.3360	0.3360	<b>0.3350</b>
	IR									
	0.3320	0.3310	0.3300	0.3290	0.3290	0.3280	0.3270	0.3270	0.3260	<b>0.3288</b>
E72FXE	EC (fuel cell)									
	0.3390	0.3360	0.3370	0.3380	0.3360	0.3370	0.3370	0.3360	0.3380	<b>0.3371</b>
EJ2AYN	EC									
	0.0950	0.0960	0.0950	0.0960	0.0960	0.0950	0.0960	0.0960	0.0950	<b>0.0956 X</b>
	IR-									
	0.0950	0.0940	0.0950	0.0940	0.0940	0.0950	0.0940	0.0940	0.0950	<b>0.0944 X</b>

TABLE 1- Item 1 - Breath Port

WebCode	Preparation Target BrAC: 0.34 g/210L									Mean	
EYWP8U	IR	0.3350	0.3340	0.3330	0.3320	0.3330	0.3320	0.3310	0.3310	0.3310	<b>0.3324</b>
F23AVU	IR	0.3330	0.3320	0.3310	0.3300	0.3290	0.3290	0.3290	0.3280	0.3280	<b>0.3299</b>
FRCZ97	IR	0.3288	0.3273	0.3284	0.3280	0.3276	0.3271	0.3273	0.3276	0.3263	<b>0.3276</b>
FTQB2J	EC/IR	0.3310	0.3320	0.3290	0.3300	0.3300	0.3260	0.3260	0.3270	0.3240	<b>0.3283</b>
GCGPB2	IR	0.3280	0.3280	0.3300	0.3290	0.3290	0.3290	0.3310	0.3310	0.3310	<b>0.3296</b>
GUDARM	IR	0.3260	0.3260	0.3250	0.3240	0.3250	0.3260	0.3250	0.3250	0.3250	<b>0.3252</b>
HYNM9Z	IR	0.3420	0.3400	0.3450	0.3410	0.3410	0.3390	0.3400	0.3360	0.3390	<b>0.3403</b>
K976GP	IR - Intoxilyzer 8000	0.3380	0.3340	0.3320	0.3340	0.3330	0.3330	0.3320	0.3340	0.3310	<b>0.3334</b>
KYFMZV	IR	0.3270	0.3270	0.3280	0.3290	0.3310	0.3310	0.3320	0.3320	0.3310	<b>0.3298</b>
L2ZQAE	IR - CMI Intoxilyzer 8000	0.3290	0.3250	0.3280	0.3270	0.3290	0.3280	0.3270	0.3300	0.3280	<b>0.3279</b>
PJMFVH	EC	0.3200	0.3290	0.3290	0.3300	0.3290	0.3280	0.3280	0.3270	0.3270	<b>0.3274</b>
	IR	0.3290	0.3280	0.3280	0.3270	0.3270	0.3260	0.3240	0.3240	0.3240	<b>0.3263</b>
RMJLPE	EC	0.3200	0.3200	0.3200	0.3190	0.3190	0.3180	0.3180	0.3180	0.3170	<b>0.3188</b>
	IR	0.3280	0.3280	0.3260	0.3270	0.3260	0.3250	0.3250	0.3250	0.3250	<b>0.3261</b>
RZ67ZA	HS-GC/FID	0.3350	0.3360	0.3360	0.3350	0.3360	0.3350	0.3370	0.3350	0.3350	<b>0.3356</b>
UX9MUD	EC	0.3360	0.3340	0.3340	0.3340	0.3330	0.3310	0.3320	0.3310	0.3290	<b>0.3327</b>
	IR	0.3270	0.3250	0.3250	0.3240	0.3240	0.3230	0.3220	0.3210	0.3210	<b>0.3236</b>
V8FJEB	EC	0.3360	0.3350	0.3350	0.3340	0.3350	0.3350	0.3340	0.3330	0.3350	<b>0.3347</b>
	IR	0.3340	0.3310	0.3300	0.3300	0.3300	0.3280	0.3270	0.3280	0.3260	<b>0.3293</b>

TABLE 1- Item 1 - Breath Port

WebCode	Preparation Target BrAC: 0.34 g/210L									Mean	
V9L43B	EC	0.3310	0.3310	0.3290	0.3280	0.3280	0.3290	0.3270	0.3270	0.3250	<b>0.3283</b>
	IR	0.3300	0.3290	0.3280	0.3270	0.3270	0.3260	0.3260	0.3240	0.3240	<b>0.3268</b>
WC2VT4	EC	0.3410	0.3400	0.3410	0.3400	0.3390	0.3380	0.3390	0.3340	0.3340	<b>0.3384</b>
WJZKA8	IR	0.3200	0.3200	0.3200	0.3190	0.3190	0.3170	0.3170	0.3160	0.3190	<b>0.3186</b>
WU7487	IR	0.3200	0.3210	0.3230	0.3230	0.3260	0.3230	0.3270	0.3230	0.3280	<b>0.3238</b>
XDCXDG	IR	0.3380	0.3340	0.3360	0.3300	0.3320	0.3320	0.3310	0.3320	0.3320	<b>0.3330</b>

#### Statistical Analysis for Item 1

Grand Mean	0.3293	Number of Entries Included	42
Standard Deviation	0.0076	Number of Entries Excluded	3

Number of entries may add up to more than the total number of participants because participants can report results for multiple methods.

TABLE 1- Item 2 - Breath Port

WebCode	Preparation Target BrAC: 0.10 g/210L									Mean
2FPYM6	EC									
	0.0960	0.0960	0.0950	0.0940	0.0950	0.0940	0.0940	0.0950	0.0940	<b>0.0948</b>
	IR									
	0.0920	0.0920	0.0920	0.0910	0.0910	0.0910	0.0900	0.0910	0.0910	<b>0.0912</b>
32ZJYW	IR									
	43.90	43.60	43.70	43.50	43.20	43.00	43.60	43.00	43.20	<b>43.41 X</b>
4DTZNX	EC									
	0.0910	0.0940	0.0930	0.0930	0.0960	0.0920	0.0950	0.0950	0.0930	<b>0.0936</b>
	IR									
	0.0920	0.0930	0.0930	0.0910	0.0940	0.0930	0.0930	0.0930	0.0930	<b>0.0928</b>
4MXAT2	EC									
	0.0930	0.0940	0.0930	0.0930	0.0920	0.0920	0.0940	0.0930	0.0920	<b>0.0929</b>
	IR									
	0.0920	0.0940	0.0930	0.0930	0.0930	0.0930	0.0920	0.0920	0.0920	<b>0.0927</b>
6DV3ZN	IR									
	0.0950	0.0930	0.0930	0.0900	0.0900	0.0890	0.0860	0.0890	0.0870	<b>0.0902</b>
99NVX9	IR									
	0.0970	0.0960	0.0960	0.0950	0.0950	0.0960	0.0950	0.0960	0.0960	<b>0.0958</b>
AAC2JG	IR									
	0.0860	0.0890	0.0920	0.0890	0.0920	0.0890	0.0930	0.0920	0.0870	<b>0.0899</b>
B7TDCP	IR									
	0.0930	0.0920	0.0920	0.0910	0.0920	0.0910	0.0910	0.0910	0.0900	<b>0.0914</b>
BE2PR9	IR									
	0.1010	0.1000	0.1010	0.1010	0.1000	0.1010	0.1010	0.1010	0.1000	<b>0.1007</b>
BFCPQN	EC									
	0.0920	0.0930	0.0930	0.0930	0.0930	0.0920	0.0910	0.0920	0.0920	<b>0.0923</b>
	IR									
	0.0920	0.0910	0.0920	0.0910	0.0910	0.0910	0.0910	0.0920	0.0910	<b>0.0913</b>
BXWHC7	IR									
	0.1000	0.0980	0.0990	0.0980	0.0990	0.0980	0.0990	0.0980	0.0990	<b>0.0987</b>
C9UECM	EC									
	0.0920	0.0920	0.0920	0.0930	0.0930	0.0930	0.0920	0.0920	0.0920	<b>0.0923</b>
	IR									
	0.0930	0.0920	0.0920	0.0920	0.0930	0.0910	0.0920	0.0920	0.0910	<b>0.0920</b>
E72FXE	EC (fuel cell)									
	0.0960	0.0960	0.0950	0.0950	0.0950	0.0950	0.0950	0.0950	0.0940	<b>0.0951</b>
EJ2AYN	EC									
	0.3270	0.3250	0.3250	0.3240	0.3240	0.3240	0.3190	0.3180	0.3230	<b>0.3232 X</b>
	IR-									
	0.3280	0.3300	0.3300	0.3290	0.3280	0.3280	0.3270	0.3280	0.3290	<b>0.3286 X</b>



TABLE 1- Item 2 - Breath Port

WebCode	Preparation Target BrAC: 0.10 g/210L									Mean	
EYWP8U	IR	0.0970	0.0960	0.0960	0.0960	0.0960	0.0950	0.0950	0.0950	0.0950	<b>0.0957</b>
F23AVU	IR	0.0940	0.0950	0.0940	0.0940	0.0950	0.0940	0.0940	0.0940	0.0930	<b>0.0941</b>
FRCZ97	IR	0.0940	0.0940	0.0940	0.0932	0.0936	0.0930	0.0928	0.0915	0.0928	<b>0.0932</b>
FTQB2J	EC/IR	0.0940	0.0930	0.0930	0.0930	0.0930	0.0920	0.0930	0.0930	0.0930	<b>0.0930</b>
GCGPB2	IR	0.0940	0.0940	0.0940	0.0940	0.0940	0.0940	0.0950	0.0940	0.0940	<b>0.0941</b>
GUDARM	IR	0.0920	0.0920	0.0920	0.0920	0.0920	0.0920	0.0920	0.0920	0.0920	<b>0.0920</b>
HYNM9Z	IR	0.0990	0.0980	0.0990	0.0990	0.1000	0.0980	0.1000	0.0980	0.0990	<b>0.0989</b>
K976GP	IR - Intoxilyzer 8000	0.0960	0.0960	0.0950	0.0960	0.0950	0.0960	0.0940	0.0950	0.0940	<b>0.0952</b>
KYFMZV	IR	0.0940	0.0940	0.0950	0.0960	0.0960	0.0960	0.0950	0.0960	0.0960	<b>0.0953</b>
L2ZQAE	IR - CMI Intoxilyzer 8000	0.0920	0.0930	0.0910	0.0920	0.0930	0.0920	0.0920	0.0930	0.0950	<b>0.0926</b>
PJMFVH	EC	0.0920	0.0920	0.0900	0.0920	0.0910	0.0920	0.0910	0.0910	0.0910	<b>0.0913</b>
	IR	0.0920	0.0920	0.0920	0.0910	0.0910	0.0910	0.0900	0.0900	0.0900	<b>0.0910</b>
RMJLPE	EC	0.0910	0.0910	0.0920	0.0900	0.0910	0.0890	0.0900	0.0910	0.0900	<b>0.0906</b>
	IR	0.0930	0.0920	0.0920	0.0910	0.0920	0.0910	0.0910	0.0910	0.0900	<b>0.0914</b>
RZ67ZA	HS-GC/FID	0.0950	0.0950	0.0950	0.0950	0.0950	0.0950	0.0950	0.0950	0.0950	<b>0.0950</b>
UX9MUD	EC	0.0940	0.0930	0.0930	0.0930	0.0930	0.0940	0.0930	0.0930	0.0930	<b>0.0932</b>
	IR	0.0930	0.0920	0.0920	0.0920	0.0920	0.0920	0.0920	0.0910	0.0910	<b>0.0919</b>
V8FJEB	EC	0.0940	0.0950	0.0930	0.0930	0.0940	0.0930	0.0930	0.0940	0.0920	<b>0.0934</b>
	IR	0.0960	0.0940	0.0920	0.0920	0.0930	0.0930	0.0930	0.0910	0.0930	<b>0.0930</b>

TABLE 1- Item 2 - Breath Port

WebCode	Preparation Target BrAC: 0.10 g/210L									Mean	
V9L43B	EC	0.0920	0.0910	0.0920	0.0930	0.0930	0.0940	0.0920	0.0920	0.0920	<b>0.0923</b>
	IR	0.0920	0.0910	0.0890	0.0910	0.0910	0.0910	0.0900	0.0910	0.0900	<b>0.0907</b>
WC2VT4	EC	0.1000	0.1020	0.0990	0.0990	0.0990	0.0980	0.0990	0.0980	0.0980	<b>0.0991</b>
WJZKA8	IR	0.0930	0.0920	0.0930	0.0930	0.0910	0.0930	0.0930	0.0920	0.0920	<b>0.0924</b>
WU7487	IR	0.0870	0.0890	0.0920	0.0910	0.0950	0.0910	0.0940	0.0920	0.0940	<b>0.0917</b>
XDCXDG	IR	0.0950	0.0930	0.0950	0.0920	0.0940	0.0930	0.0940	0.0950	0.0930	<b>0.0938</b>

#### Statistical Analysis for Item 2

Grand Mean	0.0934	Number of Entries Included	42
Standard Deviation	0.0025	Number of Entries Excluded	3

Number of entries may add up to more than the total number of participants because participants can report results for multiple methods.

TABLE 1-Breath Port Summary Statistics

Response Summary	Breath Port	
	Item 1	Item 2
<b>Preparation Target BrAC (g/210L):</b>	<b>0.34</b>	<b>0.10</b>
Grand Mean	0.3293	0.0934
Standard Deviation	0.0076	0.0025

# Additional Comments

TABLE 2

WebCode	Additional Comments
4DTZNX	Item 1 simulator: [serial number], Thermometer: [serial number]. Item 2 simulator: [serial number], Thermometer: [serial number]. Instrument: [serial number]. U.O.M. for measurements $\geq 0.16\%$ = $\pm 0.012$ . U.O.M. for measurements between 0.09-0.15% = $\pm 0.007$ . [From Table 1 - Item 1 - Breath Port: "(ABA mode)"]
99NVX9	Item 1 analyzed on 6/22/18, Item 2 analyzed on 6/24/18
9WRZNK	Instrument Used: Intoxilyzer 5000EN. Instrument [Serial Number]. Accuracy Check: 0.079, 0.080; Guth 0.08%, lot 16180 exp. 8/1/2018
EJ2AYN	I waited 3 minutes between test and test in IR. in the EC it is expected between test and test 5 minutes. Environmental conditions : Temperature: 24.2 ° C; Relative Humidity: 60%. First the IR measurements were made and then the EC. the reference material is uncovered at a temperature of 20 ° C
FRCZ97	Simulator used Guth Model 2100 and tested with Drager 7110 MK5.
GUDARM	Multi-vessel wet calibrator and dragger 9510 instrument.
HD4VWB	used instrument [serial number]
K976GP	Due to instrument related problem: Breath port measurements conducted on [serial number]. Calibration port measurements conducted on [serial number]
L2ZQAE	While performing assessment of item 1 through the calibration port, I miscounted the number of trials completed, doing eight instead of nine. I didn't realize this until I started with item 2. I finished assessment of item 2 and waited one hour before assessing item 1 for a ninth time. The final sim temp and finish time reflect the time and temp that this ninth assessment was performed. The previous eight assessments ended at 12:47 hrs.
RZ67ZA	Our laboratory analyzes alcohol reference solutions by HS-GC/FID. These testing solutions were analyzed on the HS-GC/FID as a proficiency test of our ability to analyze alcohol reference solutions.
WC2VT4	Uncertainty for Item 1 is $\pm 0,011$ g/210L. Uncertainty for Item 2 is $\pm 0,005$ g/210L. Temperature 21,9 ° C $\pm 0,4$ ° C. Humidity 51,0% HR $\pm 1,4\%$ HR

-End of Report-  
(Appendix may follow)

## **Appendix: Data Sheet**

Collaborative Testing Services ~ Forensic Testing Program

### **Test No. 18-568: Breath Alcohol Simulator Solution Analysis**

DATA MUST BE RECEIVED BY June 25, 2018 TO BE INCLUDED IN THE REPORT

Participant Code: \_\_\_\_\_

WebCode: \_\_\_\_\_

#### **Accreditation Release Statement**

CTS submits external proficiency test data directly to ASCLD/LAB, ANAB, and A2LA. Please select one of the following statements to ensure your data is handled appropriately.

- This participant's data is intended for submission to ASCLD/LAB, ANAB, and/or A2LA. (Accreditation Release section on the last page must be completed and submitted.)
- This participant's data is **NOT** intended for submission to ASCLD/LAB, ANAB or A2LA.

#### **Instructions**

Test the simulator solutions provided using either the calibration port or the breath port of your breath test instrument following your laboratory's procedure (except where noted).

#### **Note:**

-Please review the data sheet in its entirety prior to beginning analysis as there are specific instructions within the reporting sections. Be advised that there are separate reporting sections for results obtained using the calibration port versus the breath port.

#### **Items Submitted (Sample Pack BR):**

Item 1: Breath Alcohol Simulator Solution I.

Item 2: Breath Alcohol Simulator Solution II.

**Date Samples Received:** \_\_\_\_\_ **Date(s) Samples Analyzed:** \_\_\_\_\_

**Please return all pages of this data sheet.**

Page 1 of 4

Participant Code:

WebCode:

### Calibration Port Measurements

**Report 9 consecutive readings for each Item to three decimal places in grams per 210 liters (you may need to convert). Record the simulator temperature before starting, every three readings, and after the last reading.**

**Method of Analysis (i.e. IR, EC, etc.):** \_\_\_\_\_

If additional methods of analysis are used, copy this page or attach your own form following this layout.

#### Calibration Port - Item 1 Analysis

Start Sim. Temp: \_\_\_\_\_ Start Time: \_\_\_\_\_

1 _____	2 _____	3 _____	Sim. Temp: _____
4 _____	5 _____	6 _____	Sim. Temp: _____
7 _____	8 _____	9 _____	

Final Sim. Temp: \_\_\_\_\_ Finish Time: \_\_\_\_\_

**\*\* Please allow at least 1 hour between finishing Item 1 and starting Item 2.\*\***

#### Calibration Port - Item 2 Analysis

Start Sim. Temp: \_\_\_\_\_ Start Time: \_\_\_\_\_

1 _____	2 _____	3 _____	Sim. Temp: _____
4 _____	5 _____	6 _____	Sim. Temp: _____
7 _____	8 _____	9 _____	

Final Sim. Temp: \_\_\_\_\_ Finish Time: \_\_\_\_\_

**Please return all pages of this data sheet.**

Page 2 of 4

Participant Code:

WebCode:

### Breath Port Measurements

**Report 9 consecutive readings for each Item to three decimal places in grams per 210 liters (you may need to convert). Record the simulator temperature before starting, every three readings, and after the last reading.**

**Method of Analysis (i.e. IR, EC, etc.):** \_\_\_\_\_

If additional methods of analysis are used, copy this page or attach your own form following this layout.

#### Breath Port - Item 1 Analysis

Start Sim. Temp: \_\_\_\_\_ Start Time: \_\_\_\_\_

1 _____	2 _____	3 _____	Sim. Temp: _____
4 _____	5 _____	6 _____	Sim. Temp: _____
7 _____	8 _____	9 _____	

Final Sim. Temp: \_\_\_\_\_ Finish Time: \_\_\_\_\_

**\*\* Please allow at least 1 hour between finishing Item 1 and starting Item 2. \*\***

#### Breath Port - Item 2 Analysis

Start Sim. Temp: \_\_\_\_\_ Start Time: \_\_\_\_\_

1 _____	2 _____	3 _____	Sim. Temp: _____
4 _____	5 _____	6 _____	Sim. Temp: _____
7 _____	8 _____	9 _____	

Final Sim. Temp: \_\_\_\_\_ Finish Time: \_\_\_\_\_

#### Additional Comments

---



---



---



---

**Return Instructions:** Data must be received via online data entry, fax (please include a cover sheet), or mail by **June 25, 2018** to be included in the report. Emailed data sheets are not accepted.

QUESTIONS?

TEL: +1-571-434-1925 (8 am - 4:30 pm EST)

EMAIL: [forensics@cts-interlab.com](mailto:forensics@cts-interlab.com)

[www.ctsforensics.com](http://www.ctsforensics.com)

Participant Code:

ONLINE DATA ENTRY: [www.cts-portal.com](http://www.cts-portal.com)

FAX: +1-571-434-1937

MAIL: Collaborative Testing Services, Inc.  
P.O. Box 650820  
Sterling, VA 20165-0820 USA

**Please return all pages of this data sheet.**

Page 3 of 4

## Collaborative Testing Services ~ Forensic Testing Program

**RELEASE OF DATA TO ACCREDITATION BODIES**

The following Accreditation Releases will apply only to:

Participant Code:

WebCode:

for Test No. **18-568: Breath Alcohol Simulator Solution Analysis**

This release page must be completed and received by **June 25, 2018** to have this participant's submitted data included in the reports forwarded to the respective Accreditation Bodies.

**Have the laboratory's designated individual complete the following steps only if your laboratory is accredited in this testing/calibration discipline by one or more of the following Accreditation Bodies.**

**Step 1: Provide the applicable Accreditation Certificate Number(s) for your laboratory**

**ANAB** Certificate No. \_\_\_\_\_

(Include ASCLD/LAB Certificate here)

**A2LA** Certificate No. \_\_\_\_\_

**Step 2: Complete the Laboratory Identifying Information in its entirety**

Signature and Title \_\_\_\_\_

Laboratory Name \_\_\_\_\_

Location (City/State) \_\_\_\_\_

**Return Instructions****Accreditation Release**

*Please submit the completed Accreditation Release at the same time as your full data sheet. See Data Sheet Return Instructions on the previous page.*

*Questions? Contact us 8 am-4:30 pm EST  
Telephone: +1-571-434-1925  
email: forensics@cts-interlab.com*

**Please return all pages of this data sheet.**

Page 4 of 4