

Lab Score Card – Superiority of LSAI’s Quality & Accuracy

Background:

A split sample was sent by the client to three reputed labs (including LSAI) in this area for full VOC analysis for lab contractor qualification purposes. A lab score card was created based on the analyte results reported by each lab.

Results:

The below table specifies the detected analytes, corresponding results, and a score value for all the three labs.

S. No	VOC Analytes Detected (8260B/5030)	LSAI Labs		Lab II		Lab III	
		result (ppb)	score	result (ppb)	score	result (ppb)	score
1	Benzene	3978	1	2410	1	3200	1
2	n-butyl benzene	35	1	41.7	1	93	0
3	sec-butyl benzene	14.6	1	20.4	1	ND	-1
4	Ethyl benzene	2258	1	1770	0	2300	1
5	n-Hexane	900	1	< 10	-1	280	1
6	Isopropyl benzene	57	0	93.5	1	91	1
7	p-Isopropyl toluene	7	1	46.6	1	ND	-1
8	1-Methyl naphthalene	133	1	106	1		0
9	2-Methyl naphthalene	200	1	209	1		0
10	Naphthalene	426	0	606	1	670	1
11	n-Propyl benzene	261	1	303	1	280	1
12	Toluene	3831	1	2540	1	3200	1
13	1,2,4-Trimethyl benzene	1622	1	1680	1	1800	0
14	1,3,5-Trimethylbenzene	427	0	520	1	510	1
15	Xylene M&P	8701	1	6310	0	8400	1
16	Xylene, Ortho	2337	1	1410	0	2600	1
17	Total xylenes	11038	1	8220	0	11000	1
Total Positive Score			14		12		11
Total Negative Score		Rank #1	0	Rank #2	-1	Rank #3	-2
Total Zero Score			3		4		4

Notes: Authorized by the client to share. A result is assumed to be true when at least 2 out of 3 labs have matching (~90%) results.

Conclusions:

The score card (total positive/negative/zero scores) suggests that LSAI results demonstrated greater accuracy and reliability. This evaluation proves LSAI's superior quality and technical capabilities relative to our competitors.

Scoring Notes:

- When there is an agreement (~ 90%) between results among 2 of the 3 labs, a **score of 1** is awarded to those two labs. The other lab scores a **zero score**.
- A **score of 1** is awarded to each lab when there is a disagreement on results between all the labs.
- Analyte #5 received a **negative score** for Lab II since the analyte was reported as < reporting limit while it's present at very high levels. Analytes #7 & #3 received a **negative score** for Lab III since the analyte was reported as ND while it's actually present in measurable levels.

Comments:

LSAI has brand new Purge & Trap (P&T) and all our dilutions are performed automatically by the P&T leading to less manual error. LSAI performs step fold dilutions such as 2x, 5x, 10x, 25x, 50x, and 100x leading to less error while our competitors typically perform only two fold dilutions, 10x and 100x. Based on this, we strongly believe that LSAI results are actually true for the analytes where LSAI **scored zero**.