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8/16/2010

Santiago Martinez
Environ Cientifica Ltda.
R. Silva Jardim, nº 251 - Centro

São Bernardo do Campo, S.P. CEP 09715 090 BRAZIL Lab ID# 102800

Dear Santiago Martinez,

Please find your laboratory's Industrial Hygiene Proficiency Analytical Testing (IHPAT) results for **Round 182**. It is the laboratory's responsibility to thoroughly review results and to immediately contact the AIHA Proficiency Analytical Testing Programs, LLC in writing, if any errors are found in your report.

The proficiency demonstrated by the results of this IHPAT round is valid until the close of the retest round, if the laboratory chooses to participate, or the results of the next IHPAT round post on November 16, 2010. Unacceptable performance may be improved by correctly analyzing a set of retest samples. Retest Order Forms are available online at **www.aihapat.org**. The deadline to order a retest is August 27, 2010. Retest sample kits are mailed via USPS Mail within five days after the order deadline.

IHPAT **Round 183** sample kits will be mailed to laboratories around October 1, 2010. Your laboratory's data will be due by 11:59pm ET on November 1, 2010. The analytes for round 183 are:

- **Metals – cadmium, lead, zinc**
- **Asbestos – chrysotile**
- **Silica – coal dust**
- **Organics – chloroform(CFM), 1,2-dichloroethane(DCE), 1,1,1-trichloroethane(MCM)**

Please handle, store and analyze your laboratory's IHPAT samples in the same manner as routine client samples. To submit results, visit the AIHA Proficiency Analytical Testing Program, LLC web page: **www.aihapat.org,** and click the PAT Data Entry Portal from the left navigation menu. **Always print and save the confirmation page** after submitting data via the PAT Data Entry Portal.

Your laboratory's password, needed to access the reports through the PAT Data Entry Portal, is provided in the upper right hand corner (next to your lab ID#) of the address label on the results worksheet included with your IHPAT samples.

I encourage you to contact me with any feedback, questions or if you wish to contest your results at nmugambwa@aiha.org.

Sincerely,

Natasha Mugambwa, MS
Manager, AIHA PAT Programs, LLC

Industrial Hygiene Proficiency Analytical Testing Results

This document contains three sub-reports relating to IHPAT Round 182. The first report contains your laboratory's results listed per contaminant, per sample. The second report contains your current and 2 previous test round performance respectively (where applicable), and the final report contains summary results for all laboratories for IHPAT round 182.

Testing Results for IHPAT Round 182

This part of the report contains your laboratory's results listed per contaminant, per sample.

Contaminant	Units	#	Result	Ref. Value	Lower Limit	Upper Limit	z-Score	Rating
Cadmium (CAD)	mg	1	0.01820	0.01712	0.01507	0.01918	1.6	A
	mg	2	0.00310	0.00290	0.00255	0.00325	1.7	A
	mg	3	0.01250	0.01168	0.01028	0.01308	1.8	A
	mg	4	0.00760	0.00709	0.00624	0.00794	1.8	A
Chromium (CHR)	mg	1	0.0855	0.0814	0.0716	0.0912	1.3	A
	mg	2	0.1033	0.0960	0.0845	0.1076	1.9	A
	mg	3	0.0326	0.0313	0.0272	0.0355	0.9	A
	mg	4	0.1758	0.1652	0.1454	0.1850	1.6	A
Lead (LEA)	mg	1	0.0859	0.0792	0.0678	0.0906	1.8	A
	mg	2	0.0489	0.0442	0.0389	0.0496	2.6	A
	mg	3	0.1629	0.1481	0.1303	0.1658	2.5	A
	mg	4	0.1144	0.1035	0.0909	0.1162	2.6	A
Silica (SIL)	mg	1	0.1192	0.1109	0.0657	0.1560	0.6	A
	mg	2	0.2023	0.1651	0.1049	0.2252	1.9	A
	mg	3	0.0747	0.0821	0.0536	0.1106	-0.8	A
	mg	4	0.1343	0.0622	0.0463	0.0781	13.6	U
Benzene (BNZ)	mg	1	0.0599	0.0549	0.0437	0.0662	1.3	A
	mg	2	0.2739	0.2595	0.2283	0.2906	1.4	A
	mg	3	0.7296	0.7080	0.6231	0.7930	0.8	A
	mg	4	0.4703	0.4544	0.3998	0.5089	0.9	A
O-xylene (OXY)	mg	1	0.9527	0.8681	0.7055	1.0308	1.6	A
	mg	2	0.4537	0.4170	0.3222	0.5117	1.2	A
	mg	3	0.5807	0.5511	0.4494	0.6528	0.9	A
	mg	4	1.1988	1.1438	0.9293	1.3584	0.8	A
Toluene (TOL)	mg	1	1.3126	1.2415	1.0780	1.4050	1.3	A
	mg	2	0.9217	0.8743	0.7575	0.9911	1.2	A
	mg	3	0.1685	0.1637	0.1441	0.1833	0.7	A
	mg	4	0.5602	0.5441	0.4760	0.6122	0.7	A

Please note:
Reference value is the mean of the reference laboratories
*Lower limit = reference value - 3 standard deviations and Upper limit = reference value +3 standard deviations
*Z-score = (reported result - reference value)/standard deviation
*Asbestos is the exception because data are positively skewed therefore transformations are used to obtain approximately normal distributions.
A: Acceptable Analysis; U: Unacceptable Analysis
The acceptability of reported results is based on upper and lower performance limits. This is why a reported result may appear unacceptable according to z-score, but be identified as acceptable.

Overall Performance Summary Concluding with 182

The following table contains your laboratory's current and 2 previous test rounds performance respectively (where applicable). For more information in regard to the determination of proficiency, please visit: http://www.aihapat.org/ihpat

Sample	Round	Round Performance	Round Score	Proficiency Status -Three Round Score
Metals	180	12/12	Pass	
	181	12/12	Pass	
	182	12/12	Pass	P
Organic Solvents	180	12/12	Pass	
	181	4/4	Pass	
	182	12/12	Pass	P
Silica	180	4/4	Pass	
	181	4/4	Pass	
	182	3/4	Pass	P

Please note:
The denominators represent the total number of samples analyzed.
The numerators represent the number of acceptable results.
Pass: Round Score ≥ 75% Fail: Round Score < 75%
P – Proficient; NP – Non-proficient; I – Indeterminate.
A laboratory is rated proficient (P) for the associated FoT/Method(s), if the laboratory has a passing score for the applicable PT analyte class in two (2) of the last three (3) consecutive PT rounds. A laboratory is rated non-proficient (NP) for the applicable FoT/Method if the laboratory has failing scores for the associated PT analyte class in two (2) of the last three (3) consecutive PT rounds.
If a laboratory receives samples and does not report the data, the results will be treated as outliers.

Performance of all Labs for IHPAT Round 182

The following table contains aggregate results for all laboratories participating in IHPAT round 182.

Contaminant	#	Ref. Value	Std Dev	RSD (%)	Total Labs	Total Acceptable	Low Outlier	High Outlier
Cadmium (CAD)	1	0.01712	0.00069	4.0	163	155	6	2
	2	0.00290	0.00012	4.0	163	148	4	11
	3	0.01168	0.00047	4.0	163	153	6	4
	4	0.00709	0.00028	4.0	163	154	5	4
Chromium (CHR)	1	0.0814	0.0033	4.0	163	148	9	6
	2	0.0960	0.0038	4.0	163	150	7	6
	3	0.0313	0.0014	4.4	163	151	6	6
	4	0.1652	0.0066	4.0	163	148	10	5
Lead (LEA)	1	0.0792	0.0038	4.8	162	158	2	2
	2	0.0442	0.0018	4.0	162	153	3	6
	3	0.1481	0.0059	4.0	162	150	6	6
	4	0.1035	0.0042	4.1	162	154	4	4
Silica (SIL)	1	0.1109	0.0150	13.6	55	51	1	3
	2	0.1651	0.0200	12.1	55	50	2	3
	3	0.0821	0.0095	11.6	55	52	2	1
	4	0.0622	0.0053	8.5	55	48	3	4
Asbestos / Fibers (ASB)	1	406	75	18.6	728	689	4	35
	2	250	29	11.4	728	553	15	160
	3	166	31	18.9	728	620	3	105
	4	77	12	15.8	728	635	66	27
Benzene (BNZ)	1	0.0549	0.0038	6.8	142	131	7	4
	2	0.2595	0.0104	4.0	142	127	8	7
	3	0.7080	0.0283	4.0	142	133	6	3
	4	0.4544	0.0182	4.0	142	130	9	3
O-xylene (OXY)	1	0.8681	0.0542	6.2	142	130	7	5
	2	0.4170	0.0316	7.6	142	131	9	2
	3	0.5511	0.0339	6.2	142	131	8	3
	4	1.1438	0.0715	6.3	142	129	11	2
Toluene (TOL)	1	1.2415	0.0545	4.4	142	133	7	2
	2	0.8743	0.0389	4.5	142	128	9	5
	3	0.1637	0.0066	4.0	142	123	9	10
	4	0.5441	0.0227	4.2	142	127	10	5