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Participant ID# 102800

Dear Santiago Martinez,

Please find your organization's final Industrial Hygiene Proficiency Analytical Testing (IHPAT) results for **Round 192**. It is the participant's responsibility to thoroughly review results and to immediately contact the AIHA Proficiency Analytical Testing Programs 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 on April 15, 2013, if the participant chooses to enroll, or until May 15, 2013 when the next IHPAT report will be available. Unacceptable performance may be improved by correctly analyzing a set of retest samples. Retest Order Forms and the PAT Programs Schedule are available online at www.aihapat.org. The deadline to order a retest is February 25, 2013.

Participants shall not describe their proficiency status in a manner that implies accreditation, certification or variations thereof. PAT results pertain only to the participant organization at the location listed on this results report. AIHA PAT Programs makes every effort to ensure that individual participant results are kept confidential and are not made public. Round results are only released to the participant and those entities requiring this information for accreditation, regulatory and contract purposes. New participants are made aware of the arrangement in advance of participation and consent is sought prior to the release of records for participants. PAT reports may not be reproduced or distributed unless copied in its entirety.

IHPAT **Round 193** sample kits will be mailed to participants around April 1, 2013. An email will be sent out upon shipment of round 193 samples. If you do not receive samples within fifteen (15) days after the ship date please contact the AIHA PAT Programs. Your organization's data will be due by 11:59pm ET on May 1, 2013. The analytes for round 193 are:

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

Samples are generated, characterized, packaged, and shipped by SRI International, Menlo Park, CA 94025 under contract with AIHA Proficiency Analytical Testing Programs. Unless otherwise noted, sample homogeneity and stability criteria were satisfied for all 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

Industrial Hygiene Proficiency Analytical Testing Results

This document contains three sub-reports relating to IHPAT Round 192. The first report contains your organization'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 participants for IHPAT round 192.

Testing Results for IHPAT Round 192

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

Contaminant	Units	#	Result	Ref. Value	Lower Limit	Upper Limit	z-Score	Rating
Nickel (NKL)	mg	1	0.0693	0.0699	0.0616	0.0783	-0.2	A
	mg	2	0.1330	0.1320	0.1162	0.1479	0.2	A
	mg	3	0.0305	0.0307	0.0270	0.0344	-0.2	A
	mg	4	0.0539	0.0545	0.0480	0.0611	-0.3	A
Cadmium (CAD)	mg	1	0.01590	0.01597	0.01405	0.01789	-0.1	A
	mg	2	0.00740	0.00736	0.00648	0.00824	0.1	A
	mg	3	0.01170	0.01140	0.01003	0.01277	0.7	A
	mg	4	0.00550	0.00540	0.00475	0.00605	0.5	A
Lead (LEA)	mg	1	0.0398	0.0403	0.0354	0.0451	-0.3	A
	mg	2	0.0619	0.0617	0.0543	0.0691	0.1	A
	mg	3	0.0978	0.0961	0.0846	0.1076	0.4	A
	mg	4	0.1636	0.1599	0.1407	0.1791	0.6	A
Silica (SIL)	mg	1	0.0790	0.0866	0.0654	0.1078	-1.1	A
	mg	2	0.1078	0.1324	0.0842	0.1806	-1.5	A
	mg	3	0.1867	0.2004	0.1584	0.2423	-1.0	A
	mg	4	0.2415	0.2598	0.1920	0.3276	-0.8	A
Methanol (MOH)	mg	1	0.0986	0.1014	0.0781	0.1246	-0.4	A
	mg	2	1.0890	1.1445	0.9283	1.3607	-0.8	A
	mg	3	0.1729	0.1923	0.1034	0.2811	-0.7	A
	mg	4	0.4691	0.4833	0.3852	0.5814	-0.4	A

Please note:

Reference value is the mean of the reference group

Lower limit = reference value - 3 standard deviations and Upper limit = reference value +3 standard deviations

Z-score = (reported result - reference value)/standard deviation;

A – Acceptable* Analysis; U - Unacceptable Analysis

Fiber data are positively skewed therefore transformations are used to obtain approximately normal distributions.

Both the assigned values and acceptance limits are based on consensus of the reference group. *The acceptability of reported results is based on upper and lower acceptance limits. This is why a reported result may appear unacceptable according to z-score, but be identified as acceptable.

Any non-participation or non-reporting of PAT data will result in unacceptable results (See PAT Programs Participation Policies, Section 2.1.6.2.)

Overall Performance Summary Concluding with 192

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

Sample	Round	Round Score	Round Performance	Proficiency Status -Three Round Score
Metals	190	12/12	Pass	
	191	12/12	Pass	
	192	12/12	Pass	P
Organic Solvents	190	11/12	Pass	
	191	12/12	Pass	
	192	4/4	Pass	P
Silica	190	4/4	Pass	
	191	4/4	Pass	
	192	4/4	Pass	P

Please note:

The denominators represent the total number of samples analyzed.

The numerators represent the number of acceptable results.

Pass: Round Score \geq 75% Fail: Round Score $<$ 75%

P – Proficient; NP – Non-proficient; I – Indeterminate (not enough rounds to determine proficiency).

A participant is rated proficient for the applicable IHPAT analyte group if the participant has a passing score for the applicable IHPAT analyte group in two (2) of the last three (3) consecutive PT rounds. A participant is rated non-proficient for the applicable PT analyte group if the participant has failing scores for the associated PT analyte group in two (2) of the last three (3) consecutive PT rounds.

Performance of all Participants for IHPAT Round 192

The following table contains aggregate results for all participants for IHPAT round 192.

Contaminant	#	Reference Value	Reference Std. Dev.**	RSD (%)	Total Participants	Total Acceptable	Low*	High*
Nickel (NKL)	1	0.0699	0.0028	4.0	146	138	4	4
	2	0.1320	0.0053	4.0	146	134	6	6
	3	0.0307	0.0012	4.0	146	135	2	9
	4	0.0545	0.0022	4.0	146	138	1	7
Cadmium (CAD)	1	0.01597	0.00064	4.0	146	141	4	1
	2	0.00736	0.00029	4.0	146	139	4	3
	3	0.01140	0.00046	4.0	146	139	3	4
	4	0.00540	0.00022	4.0	146	142	2	2
Lead (LEA)	1	0.0403	0.0016	4.0	146	139	4	3
	2	0.0617	0.0025	4.0	146	139	2	5
	3	0.0961	0.0038	4.0	146	136	6	4
	4	0.1599	0.0064	4.0	146	140	4	2
Silica (SIL)	1	0.0866	0.0071	8.1	52	44	2	6
	2	0.1324	0.0161	12.1	52	50	1	1
	3	0.2004	0.0140	7.0	52	41	6	5
	4	0.2598	0.0226	8.7	52	43	6	3
Asbestos / Fibers (ASB)	1	137	27	20.0	722	648	6	68
	2	337	67	20.0	722	700	4	18
	3	203	41	20.0	722	679	5	38
	4	89	18	20.0	722	679	28	15
Methanol (MOH)	1	0.1014	0.0077	7.6	123	102	6	15
	2	1.1445	0.0721	6.3	123	104	7	12
	3	0.1923	0.0296	15.4	123	118	1	4
	4	0.4833	0.0327	6.8	123	102	8	13

*Low – < Lower Limit ; High – > Upper Limit

**The reference group standard deviation is used but is limited to no less than 4% relative standard deviation or no greater than 20% relative standard deviation.