



**AIHA
PAT
PROGRAMS**

AIHA Proficiency Analytical Testing Programs

2700 Prosperity Avenue, Suite 250, Fairfax, VA 22031 USA

main 1+ 703-846-0757 *fax* 1+ 703-207-8558

email info.patllc@aiha.org *web* www.aihapat.org

Report Issue Date: 02/17/2012

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

São Bernardo do Campo, S.P. CEP 09715 090 BRAZIL

Participant ID# 102800

Dear Santiago Martinez,

Please find your laboratory's final Industrial Hygiene Proficiency Analytical Testing (IHPAT) results for **Round 188**. 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 13, 2012, if the participant chooses to enroll in the retest round, or the posting of the results of the next IHPAT round on May 15, 2012. 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 29, 2012.

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. Round results are only released to the participant and those entities requiring this information for accreditation 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 189** sample kits will be mailed to participants around April 1, 2012. An email will be sent out upon shipment of round 189 samples. If you do not receive samples within fifteen (15) days please contact the AIHA PAT Programs. Participant data will be due by 11:59pm ET on May 1, 2012. The analytes for round 189 are:

- **Metals – cadmium, lead, nickel**
- **Asbestos – chrysotile**
- **Silica – calcite**
- **Organics – n-butyl acetate(BAC), ethyl acetate(EAC), 2-propanol(IPA)**

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 188. 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 188.

Testing Results for IHPAT Round 188

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
Manganese	mg	1	0.1053	0.1043	0.0918	0.1168	0.2	A
	mg	2	0.0839	0.0824	0.0716	0.0931	0.4	A
	mg	3	0.1405	0.1377	0.1204	0.1551	0.5	A
	mg	4	0.0629	0.0624	0.0550	0.0699	0.2	A
Cadmium (CAD)	mg	1	0.01776	0.01687	0.01484	0.01890	1.3	A
	mg	2	0.00609	0.00573	0.00479	0.00668	1.1	A
	mg	3	0.01100	0.01064	0.00925	0.01203	0.8	A
	mg	4	0.02332	0.02246	0.01942	0.02550	0.8	A
Lead (LEA)	mg	1	0.0559	0.0549	0.0483	0.0616	0.4	A
	mg	2	0.1845	0.1738	0.1529	0.1946	1.5	A
	mg	3	0.1185	0.1143	0.0996	0.1290	0.9	A
	mg	4	0.0824	0.0805	0.0699	0.0911	0.5	A
Silica (SIL)	mg	1	0.1193	0.1210	0.0882	0.1539	-0.2	A
	mg	2	0.1797	0.1766	0.1085	0.2446	0.1	A
	mg	3	0.1504	0.1386	0.0888	0.1883	0.7	A
	mg	4	0.0764	0.0810	0.0537	0.1083	-0.5	A
Chloroform (CFM)	mg	1	1.5510	1.4800	1.3024	1.6576	1.2	A
	mg	2	0.3125	0.3027	0.2554	0.3499	0.6	A
	mg	3	1.0381	1.0135	0.8919	1.1351	0.6	A
	mg	4	0.7862	0.7617	0.6703	0.8531	0.8	A
1,2-Dichloroethane (DCE)	mg	1	0.8260	0.7710	0.6571	0.8849	1.4	A
	mg	2	0.4395	0.4222	0.3715	0.4728	1.0	A
	mg	3	1.3298	1.2642	1.0951	1.4333	1.2	A
	mg	4	0.8616	0.8250	0.7034	0.9467	0.9	A
1,1,1-Trichloroethane (MCM)	mg	1	0.6277	0.5823	0.5063	0.6583	1.8	A
	mg	2	0.2759	0.2633	0.2317	0.2949	1.2	A
	mg	3	1.0002	0.9569	0.8421	1.0718	1.1	A
	mg	4	1.4682	1.4155	1.2242	1.6068	0.8	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 188

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/ProficiencyTestingPrograms/iempat/Pages/default.aspx>

Sample	Round	Round Performance	Round Score	Proficiency Status -Three Round Score
Metals	186	12/12	Pass	
	187	12/12	Pass	
	188	12/12	Pass	P
Organic Solvents	186	12/12	Pass	
	187	4/4	Pass	
	188	12/12	Pass	P
Silica	186	4/4	Pass	
	187	4/4	Pass	
	188	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.

A participant is rated proficient (P) for the associated FoT/Method(s), if the participant has a passing score for the applicable PT analyte class in two (2) of the last three (3) consecutive PT rounds. A participant is rated non-proficient (NP) for the applicable FoT/Method if the participant has failing scores for the associated PT analyte class in two (2) of the last three (3) consecutive PT rounds.

If a participant receives samples and does not report the data, the results will be treated as outliers.

