

IHPAT Round 212  
 Proficiency Testing Performance for Participant ID: PAT-100903

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 Report Issue Date: 02/21/2018

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This report contains your organization's IHPAT Proficiency Analytical Testing results for **IHPAT Round 212**. It is the participant's responsibility to thoroughly review the information in this final report and to immediately contact the AIHA Proficiency Analytical Testing Programs in writing, if any errors are found.

### IHPAT Results

The final report is comprised of two sections relating to IHPAT Round 212. The first section contains your organization's results listed per analyte, per sample. The second section contains your current performance and performance from the two previous rounds, respectively (where applicable). Summary results for all participants for IHPAT Round 212 are located in a separate report.

### Testing Results for IHPAT Round 212

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

Contaminant	Unit	#	Result	Ref. Value	Lower Limit	Upper Limit	z-Score	Rating
Cadmium (CAD)	mg	1	0.0193	0.01909	0.0168	0.02138	0.3	A
	mg	2	0.00404	0.00398	0.0035	0.00446	0.4	A
	mg	3	0.00692	0.00696	0.00598	0.00793	-0.1	A
	mg	4	0.0111	0.01114	0.0098	0.01248	-0.1	A
Lead (LEA)	mg	1	0.0391	0.04119	0.03625	0.04614	-1.3	A
	mg	2	0.165	0.17068	0.1491	0.19226	-0.8	A
	mg	3	0.0863	0.09207	0.07976	0.10437	-1.4	A
	mg	4	0.112	0.11838	0.10365	0.13311	-1.3	A
Manganese (MNG)	mg	1	0.131	0.14112	0.12418	0.15805	-1.8	A
	mg	2	0.053	0.0557	0.04901	0.06238	-1.2	A
	mg	3	0.0853	0.09303	0.08071	0.10534	-1.9	A
	mg	4	0.0289	0.03088	0.02711	0.03466	-1.6	A
1-Bromopropane (BPP)	mg	1	0.679	0.73319	0.5899	0.87649	-1.1	A
	mg	2	0.49	0.53007	0.43029	0.62984	-1.2	A
	mg	3	0.315	0.34213	0.26645	0.41781	-1.1	A
	mg	4	0.141	0.14891	0.10751	0.19031	-0.6	A
Chloroform (CFM)	mg	1	0.455	0.4735	0.40716	0.53984	-0.8	A
	mg	2	0.863	0.87798	0.73159	1.02436	-0.3	A
	mg	3	0.267	0.27635	0.23154	0.32116	-0.6	A
	mg	4	0.522	0.53942	0.45811	0.62074	-0.6	A
1,2-Dichloroethane (DCE)	mg	1	0.157	0.15017	0.12928	0.17106	1	A
	mg	2	0.724	0.68984	0.59732	0.78236	1.1	A
	mg	3	0.56	0.53832	0.46212	0.61452	0.9	A
	mg	4	0.345	0.33536	0.29082	0.3799	0.6	A

### Statistical Analysis Interpretation Note:

Reference value is the mean of the reference group.

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

z-Score = (reported result - reference value)/standard deviation. Note: z-Scores indicate how far a particular score is away from the mean. 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.).

Measurement uncertainty of any assigned value is also available on the respective certificate of analysis for the round.

**Technical Comment:** Asbestos sample 1 was not scored because the data from the Reference Group had an unacceptable standard deviation and the resulting mean was significantly different from the expected result. All asbestos participants who submitted data for sample 1 received full credit for this sample. Validation mean for asbestos sample 1 was 106 f/mm2.

**Overall Performance Summary Concluding with IHPAT Round 212**

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

Analyte Class	Round	Round Score	Round Performance	Proficiency Status - Three Round Score
Metals	210	12/12	PASS	
	211	12/12	PASS	
	212	12/12	PASS	PROFICIENT
Organic Solvents	210	9/12	PASS	
	211	12/12	PASS	
	212	12/12	PASS	PROFICIENT

**Interpretation Notes:**

The denominators represent the total number of samples analyzed. The numerators represent the number of acceptable results.

Pass: Round Score greater than or equal to 75%

Fail: Round Score less than 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.

Additional information on the following items are available in the IHPAT Scheme Plan:

Procedures used to statistically analyze the data, establish the assigned value and standard deviation for proficiency assessment, or other criteria for evaluation; details of the metrological traceability and measurement uncertainty of the assigned value; information about design and implementation of PT scheme. The Industrial Hygiene Scheme Plan is available in the PAT Portal. Measurement uncertainty of any assigned value is also available on the respective certificate of analysis for the round.

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 samples are generated, verified, packaged, and shipped by SRI International under contract with AIHA Proficiency Analytical Testing Programs. Unless otherwise noted, sample homogeneity and stability criteria were satisfied for all samples.

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