



Report Issue Date: 05/15/2014

Frank Ehrenfeld  
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Participant ID# 100188

Dear Frank Ehrenfeld,

Please find your organization's Environmental Lead Proficiency Analytical Testing Lead-in-Air results for **ELPAT Air Round 87**. 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 ELPAT Air round is valid until the results of the retest round are available on July 15, 2014, if the participant chooses to enroll, or until August 15, 2014 when the next ELPAT Air report will be available. Unacceptable performance may be improved by correctly analyzing a set of retest samples. If you require a retest for the round, you may order one by completing the Retest Order Form available online at [www.aihapat.org](http://www.aihapat.org). The completed form and payment must be received by May 29, 2014. Refer to the PAT Programs Schedule located at [www.aihapat.org](http://www.aihapat.org) for important retest round dates.

Please handle, store and analyze your PAT samples in the same manner as routine client samples. To submit results, visit the Proficiency Analytical Testing (PAT) page and click on the PAT Data Entry Portal: [www.aihapat.org](http://www.aihapat.org). **Always print and save the confirmation page** after submitting data via the PAT Data Entry Portal.

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.

Any enrolled participant that is unable to participate in a PT round must request an "Excused Absence" in order to not receive outliers and an unacceptable performance rating. This written request must be received before the PT round closes. Please note that an "Excused Absence" will not be granted for more than two consecutive rounds.

**ELPAT Air Round 88** sample kits will be mailed to participants around July 1, 2014. An email will be sent out upon shipment of the 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 August 1, 2014.

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 [aoler@aiha.org](mailto:aoler@aiha.org).

Sincerely,

Angela Oler  
Manager, AIHA PAT Programs

## Environmental Lead Proficiency Analytical Testing Results

This document contains three sub-reports relating to ELPAT-Air Round 87. The first report contains your organization's results listed per contaminant, per sample. The second report contains your past proficiency data for 2 and 4 rounds respectively (where applicable), and the final report contains summary results for all participants for ELPAT-Air Round 87.

### Testing Results for ELPAT-Air Round 87

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

Contaminant	Units	#	Result	Reference Value	Lower Limit	Upper Limit	z-Score	Rating
Lead in Air (AIR)	mg/m3	1	0.0895	0.0936	0.0824	0.1048	-1.1	A
	mg/m3	2	0.1023	0.1026	0.0857	0.1194	-0.1	A
	mg/m3	3	0.0584	0.0600	0.0517	0.0683	-0.6	A
	mg/m3	4	0.0672	0.0706	0.0593	0.0820	-0.9	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 are used to predict trends and to indicate how far a particular score is away from the mean.

A – Acceptable\* Analysis; U - Unacceptable Analysis

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 87

The following table contains overall proficiency results for 2 and 4 rounds respectively (where applicable). For more information in regard to the determination of proficiency, please visit [www.aihapat.org](http://www.aihapat.org).

Sample	Round	Round Performance	2 Rounds	2 Round %	4 Rounds	4 Round %	Proficiency
Air	84	4/4					
	85	4/4					
	86	4/4					
	87	4/4	8/8	100	16/16	100	P

### Interpretation Note:

The denominators represent the total number of samples analyzed.

The numerators represent the number of acceptable results.

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

A participant is rated proficient for the applicable ELPAT matrix if the participant's performance meets any of the following: (1) In the last two rounds, all samples are analyzed and the results are 100% acceptable; or (2) Three fourths (75%) or more of the accumulated results over four rounds are acceptable. A participant is rated non-proficient for the applicable matrix if the participant's performance does not meet either of the proficiency categories mentioned above.

The following items are available in the [Environmental Lead Scheme Plan](#):

Procedures used to statistically analyze the data, establish any assigned value and standard deviation for proficiency assessment, or other criteria for evaluation; details of the metrological traceability and measurement uncertainty of any assigned value; information about design and implementation of PT scheme. Environmental Lead Scheme Plan available at <http://www.aihapat.org/documents-policies-fees/Pages/default.aspx>.

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

**Technical Comment:** No remarkable observations.

## Performance of all Participants for ELPAT-Air Round 87

The following table contains aggregate results for all participants ELPAT-Air Round 87.

Contaminant	#	Ref. Value	Ref. Std. Dev.**	RSD (%)	Uncertainty Measurement	Total Participants	Total Acceptable	Low*	High*
Lead in Air (AIR)	1	0.0936	0.0037	4.0	0.000524	107	99	3	5
	2	0.1026	0.0056	5.5	0.000787	107	103	2	2
	3	0.0600	0.0028	4.6	0.000386	107	104	2	1
	4	0.0706	0.0038	5.4	0.000529	107	100	2	5

**Note:** \*\*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.

\***Low** – number of participant results that are less than the Lower Limit; \***High** - number of participant results that are greater than the Upper Limit. Reference group/participant data sets for individual methods are not separated out during statistical analysis. Methods appear equivalent during data review.

Additional technical comments or recommendations, when available, shall be shared with participants via the web and participants shall be notified via email.