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# **Lead in Paint Laboratory Databank**

## **Questionnaire for Laboratories Analyzing Lead in Paint**

## Background

The Global Alliance to Eliminate Lead Paint (the Lead Paint Alliance herein) is a voluntary partnership formed by the United Nations Environment Programme (UNEP) and the World Health Organization (WHO) to prevent exposure to lead through promoting the phase-out of paints containing lead. The Lead paint Alliance is guided by an Advisory Council chaired by the US Environmental Protection Agency (US EPA) and consisting of Government representatives from Colombia, Republic of Moldova, Kenya, Thailand, the International Pollutants Elimination Network (IPEN), Health and Environmental Alliance (HEAL), the American Bar Association, Rule of Law Initiative (ABA ROLI) the World Coating Council (formerly IPPIC), AkzoNobel and Pacific Paint (Boysen) Philippines (paint companies).

The primary goal of the Lead Paint Alliance is to prevent children’s exposure to paint containing lead and to minimize occupational exposure to lead paint. Its broad objective is to achieve the phase‐out of the manufacture and sale of paints containing lead and to eventually eliminate the risks that such paints pose.

The Lead Paint Alliance has developed a [Model Law and Guidance for Regulating Lead Paint](https://www.unenvironment.org/resources/publication/model-law-and-guidance-regulating-lead-paint), to support countries to enact new laws (or to modify their existing ones) to establish a single regulatory limit on the total lead containing in paint. The Model Law provides three mechanisms to promote compliance with, and enforcement of, the total lead limit: i) third-party testing, ii) declaration of conformity, and iii) government inspection. The burden of demonstrating compliance with the law primarily falls paint manufacturers and importers, as they are requested to provide proof of compliance. Lack of in-country laboratory capacity should not be seen as an obstacle to adopting the Model Law, as industry can still comply with the law by sending paint samples to laboratories in other countries that are qualified to perform the required testing. Creating a databank of laboratories undertaking lead paint testing will provide information to countries that lack national laboratory capacity and fear that this would be an obstacle to implementing a regulatory limit on total lead content in new paint.

It is envisaged that the Databank will list available laboratories from all UN regions, including both developed and developing countries, capable of identifying and quantifying lead in paint samples. It is also envisaged that as countries pass lead paint laws, the Databank of laboratory capacity for testing lead paint will grow over time. Once established, the Databank will be accessible online and periodically updated. For each listed laboratory, the Databank will offer publicly available information of interest, such as contact details, number of staff, instrumentation, analytical techniques, costs, etc. Registration in the databank will be voluntary and listing will not indicate any endorsement or recommendation by UNEP. Inclusion in the Databank is not assurance that the laboratory has met any or all applicable accreditation and proficiency requirements relevant to lead paint testing and users of the Databank are urged to verify laboratories meet necessary requirements.

The purpose of this questionnaire is to collect specific information from laboratories performing lead in paint analysis in order to populate the databank. We therefore kindly ask managers of relevant laboratories to fill out the questionnaire and send it back to UNEP Chemicals and Health Branch at email [lead-cadmiumchemicals@un.org](mailto:lead-cadmiumchemicals@un.org).

On behalf of UNEP and WHO, we thank you very much for your cooperation and look forward to your input.

## Laboratory and contact information

|  |  |  |  |
| --- | --- | --- | --- |
| Name of laboratory: |  | | |
| Organization/institution (if applicable): |  | | |
| Street |  | Number: |  |
| City: |  | State: |  |
| Country: |  | Postal Code: |  |
| UN regions[[1]](#footnote-1): | Choose an item. | | |
| Telephone: |  | | |
| E-mail: |  | | |
| Website: |  | | |

|  |  |
| --- | --- |
| Contact person (#1): |  |
| Position/job title: |  |
| E-mail: |  |
| Telephone: |  |
| Mobile: |  |

|  |  |
| --- | --- |
| Contact person (#2): |  |
| Position/job title: |  |
| E-mail: |  |
| Telephone: |  |
| Mobile: |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Type of Laboratory** (multiple boxes can be chosen) | | | |
| Public/Governmental | Private | Research Center | |
| Function of the Laboratory: | | | |
|  | | | |
| Does the laboratory offer services to national customers? | | | Yes  No |
| Does the laboratory offer services to international customers? | | | Yes  No |
| Does the laboratory have any restrictions on which international customers service is provided to? | | | Yes  No |
| When did your laboratory start operating [starting year, yyyy]: | | |  |
| Experience with measurement of total lead in paint since [starting year, yyyy]: | | | |
| Other types of lead analysis performed | | | Yes  No |
| If yes: please specify | | | |
| Experience with other lead analysis since [starting year, yyyy]: | | | |

## Staff analyzing lead in paint

|  |  |
| --- | --- |
| Professionals [number of staff] | Ph.D.:; MD:; M.Sc.:;  Technicians: |
| Others (administration, assistants, etc.) [number of staff]: |  |

## Clients for lead in paint analysis

Please indicate what proportion of the analyses to measure lead in paint are carried out for different categories of client

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| The laboratory offers services to third parties[[2]](#footnote-2)? | | Yes /  No | | |
| Principal clients ( %) | Public/Governmental | | Private/industry | Research center |
| National |  | |  |  |
| Foreign Countries |  | |  |  |

## Sampling procedure for lead in paint

|  |  |  |  |
| --- | --- | --- | --- |
| How many lead paint samples is the laboratory handling per year? |  | | |
| Does the laboratory have a written procedure specifying how paint samples should be collected? | | | Yes /  No |
| What are the main points of the procedure (i.e. sample type, quantity, substrate etc)? | |  | |

Please indicate which sample preparation are used by the laboratory for lead paint.

**International Standards for Sample Preparation**:

ISO 1513, Paints and varnishes – Examination and

preparation of test samples  Yes  No

ISO 1514, Paints and varnishes – Standard panels for testing  Yes  No

ASTM E1645-16, Standard Practice for Preparation of Dried Paint Samples

by Hotplate or Microwave Digestion for Subsequent Lead Analysis  Yes  No

ASTM E1979-17, Standard Practice for Ultrasonic Extraction of Paint,

Dust, Soil, and Air Samples for Subsequent Determination of Lead  Yes  No

## Lead in paint analytical methods offered by the laboratory

Please indicate for each applicable analytical instrument the following information in the table below:

|  | Analytical instrument | | |  |
| --- | --- | --- | --- | --- |
| Flame Atomic Absorption Spectrometry (FAAS) | Graphite Furnace Atomic Absorption Spectrometry (GFAAS) | Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES) | Other (please specify) |
| Limit of detection for total lead (ppm) |  |  |  |  |
| Minimum sample size for analysis (specify units) |  |  |  |  |
| Form of the paint sample |  |  |  |  |
| Cost per sample (USD) (bulk discount available?) |  |  |  |  |
| Turnaround time (minutes) |  |  |  |  |

Please indicate which analytical methods are used by the laboratory for lead paint.

**International Standards for Analytical Methods**:

ISO 6503, Paints and varnishes - Determination of total

lead - Flame atomic absorption spectrometric method  Yes  No

ASTM D3335-85a (2014), Standard Test Method for Low Concentrations of

Lead, Cadmium, and Cobalt in Paint by Atomic Absorption Spectroscopy  Yes  No

ASTM E1613-12, Standard Test Method for Determination of Lead by

Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES),

Flame Atomic Absorption Spectrometry (FAAS), or Graphite Furnace

Atomic Absorption Spectrometry (GFAAS) Techniques  Yes  No

ASTM F2853-10(2015). Standard Test Method for Determination of  Yes  No Lead in Paint Layers and Similar Coatings or in Substrates and Homogenous Materials by Energy Dispersive X-Ray Fluorescence Spectrometry Using Multiple Monochromatic Excitation Beams

## Quality Assurance Program

7.1 Does the laboratory have a quality assurance (QA) program in place?  Yes  No  
(example: standard operating procedures for all laboratory operations, training procedures, quality standards for reagents)

7.2 Does the laboratory have a quality control (QC) system in place?  Yes  No  
(example: comparison of results against reference standards, daily calibration of equipment*.*)

* 1. Does the laboratory have a person with specific responsibility for QA/QC?  Yes  No

7.4 Does the laboratory participate in an external proficiency testing scheme for lead in paint?  Yes  No

If yes, which and when (date, year)?

…………………………………………………………………………..

7.5 Has your laboratory already participated in an interlaboratory assessment undertaken by UNEP or WHO?  Yes  No

7.6 Comments  
 …………………………………………………………………………...

## Accreditation

Please indicated below whether the laboratory demonstrates competence and proficiency in testing through third party accreditation and proficiency programs.

Is the laboratory accredited to ISO/IEC 17025 Testing and calibration laboratories?

Yes  No

If yes, with which accreditation body:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Is the laboratory participating in any proficiency programs, such as the Environmental Lead Proficiency Analytical Testing Program

Yes  No

If yes, which program, matrix and outcome and date of last proficiency rating:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Indicative list of the most important publications related to lead paint, if any

Please provide information about recent important publications by laboratory staff on lead paint

|  |  |  |
| --- | --- | --- |
| Author(s) | Title | Year of publication / Journal |
|  |  |  |
|  |  |  |

## Additional comments /recommendations

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Thank you.

1. Please visit <https://www.un.org/depts/DGACM/RegionalGroups.shtml> to find your region [↑](#footnote-ref-1)
2. Laboratory has no financial or other interest in the transaction between the manufacturer or the importer and the distributor or retailer. [↑](#footnote-ref-2)