

# Lead Safe Paint Certification Requirements

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[www.lead safepaint.org](http://www.lead safepaint.org)

**Prepared by**  
IPEN  
Perry Gottesfeld

## Foreword

Lead Paint continues to be manufactured, sold and used in developing countries and countries in transition, even though it has been banned in industrialized countries for decades and cost-effective substitutes for leaded raw materials are easily available. Even in countries where many of the responsible paint manufacturers have reformulated, it is impossible for a customer to distinguish between a paint with high levels of lead and a safe paint. Therefore, IPEN initiated the Lead Safe Paint Certification as an international standard to help consumers, painters, architects, contractors, and other bulk purchasers to choose lead safe paints.

This Lead Safe Certification was developed by IPEN in a multi-stakeholder process involving industry representatives and NGOs, under the Asian Lead Paint Elimination Project. The Asian Lead Paint Elimination Project has been established to eliminate lead in paint and raise widespread awareness among business entrepreneurs and consumers about the adverse human health impacts of lead-based paints, particularly on the health of children. The Asian Lead Paint Elimination Project is being implemented by IPEN over a period of three years in seven countries (Bangladesh, India, Indonesia, Nepal, Philippines, Sri Lanka, and Thailand) with funding from the European Union (EU) totaling €1.4 million. While this program has been developed with the assistance of the EU, its contents are the sole responsibility of IPEN, and no responsibility can be assigned to the EU.

IPEN is an international NGO network of health and environmental organizations from all regions of the world in which organizations from each of the seven countries participate. IPEN is a leading global organization working to establish and implement safe chemicals policies and practices to protect human health and the environment. Its mission is a toxics-free future for all. IPEN helps build the capacity of its member organizations to implement on-the-ground activities, learn from each other's work, and work at the international level to set priorities and achieve new policies.

The European Union is made up of 27 Member States who have decided to gradually link together their know-how, resources and destinies. Together, during a period of enlargement of 50 years, they have built a zone of stability, democracy and sustainable development, while maintaining cultural diversity, tolerance and individual freedom. The EU is committed to sharing its achievements and its values with countries and people beyond its borders.

## I. Purpose

The certification requirements apply to certification bodies and their designated field representatives conducting assessment of paint products under the Lead Safe Paint Certification Standard. The procedures outlined below describing sample collection, handling, preparation and laboratory analysis for total lead content, are intended for verifying that certified products have less than 90 parts per million (ppm) lead based on dry weight of the paint.

## II. Background

This protocol is suitable for the collection, preparation, and analysis of samples of new paint to be analyzed for lead content. The Lead Safe Paint Certification Standard, as well as many national regulations, limits the concentration of lead in paint based on the percent of lead by weight in the dry paint. This means that the concentration of total lead is measured as the mass of lead divided by the total mass of the dry paint once all volatiles have evaporated. Hence, samples of dry paint will be analyzed under this standard instead of samples of wet paint. Results from laboratories conducting the analysis of new paint samples for lead content will be reported in parts per million (ppm).

Definitions:

**Brand** is a trade name or logo or product label design, or a combination of these, employed in marketing a product or a family of products that may include a number of colors or various formulations to cover a range of surface applications for commercially available paints.

**Manufacturer** is any company that manufactures paint.

**Paint** is a mixture of resins, pigments, fillers, solvents, and other additives that constitute a finished product including varnishes, lacquers, stains, enamels, glazes, primers or coatings used for any purposes.

**Paint categories** include all paints sold under a paint brand and include e.g. Enamel paints, Water Emulsions, Distempers, Wood Coatings, and other paints for interior or exterior application.

**Production lot** is the paint made in a vessel at one time from the same raw materials under the same conditions.

**Certification Body** is the organization designated in a particular region or country to administer the Lead Safe Paint certification in that jurisdiction.

**Water-based paint** is any paint using water as the main diluent.

**Oil-based paint** is any paint using one or a combination of organic solvents as the main diluent

### III. Initial Paint Analysis

As part of the process to seek certification under the Lead Safe Paint Certification Standard, a paint manufacturer must submit samples of all paints being sold or distributed by the company under the specified brand name to be covered by the certification. The initial assessment during the application process shall require analysis of all paints manufactured and distributed under the brand name for which certification is being sought. Note that all sub-brands under a brand must be tested and included in the certification.

Following the submittal of an application to the certification body the paint manufacturer shall deliver a sealed, can of the paint containing a minimum of 100 mL to the certification body or their designated representative. The cans shall be transmitted along with a chain-of-custody form numerating every sample in a given shipment as described in Appendix A.

The paint cans shall be selected for testing by the manufacturer through collaboration and approval by the certification body to ensure that they are representative of all similar products manufactured from a standard production line in a similar way, in a typical sized batch, and without altering the standard formula. No individual samples or special production lots shall be made for certification testing purposes.

Each paint container must be identified by a label identifying the production lot identification number, manufacture date, and assigned product code and/or name consistent with the product list provided with the application. The label shall not be placed over any text on the product label, but can be placed on a location without text, or on the top of the container. If no area of the container is available for the label, the paint can be placed in a clear plastic bag and the label should be affixed to it.

The individual preparing the sample is responsible for properly packaging the paint containers for transport to the certification Body. This responsibility includes filling out, dating, and signing the appropriate portion of the chain-of-custody record.

The sealed container should then be placed in a transportation case along with the chain-of-custody record form. The transportation case should then be sealed and labeled. All records should be filled out legibly in waterproof pen.

When transferring the possession of the samples, the courier or company representative must sign and record the date and time on the chain-of-custody record. Custody transfers should inventory and list each individual sample, although samples may be transferred as a group. Every person who takes custody of the samples must fill in the appropriate section of the chain-of-custody record.

### IV. Ongoing Surveillance

The designated certification body will be responsible for conducting ongoing surveillance of the lead content of certified paint products being sold in retail and/or wholesale markets in their geographical territory. The purchasing and analysis of these products will be an ongoing activity without any specified testing schedule. However, a

minimum number of samples will be tested on an annual basis for each participating brand based on production volume as explained below.

The testing of products will be conducted under the following scenarios:

- To periodically check the concentration of lead in certified paint products against the criteria of the Lead Safe Paint Certification Standard;
- Whenever the certification body is notified of a material change in the formulation of a certified paint product;
- To investigate a testing failure when a certified paint product exceeds the concentration of lead specified in the Lead Safe Paint Certification Standard.

Each of these scenarios will involve a specific sampling strategy determined by the certification body in compliance with this document. None of this testing is a substitute for a manufacturer's internal control of lead content of ingredients used in manufacturing paints and other coatings. Further information for addressing each of these testing scenarios is outlined below:

### **Periodic Testing**

Based on product distribution information provided by paint manufacturers for the certified products, the certification body will develop a specific testing plan based on the Sampling Strategy provided in Section V., sampling logistics and product availability. The purchasing of paint products from stores and other distribution points may be subcontracted to other organizations or contractors who operate local or regional offices within the manufacturer's distribution network. However, the development of a company/brand-specific sampling plan specifying the frequency, schedule, geographical markets to be surveyed, and mix of products to be tested will be prepared by the certification body. This plan will be updated annually based on changes in market conditions, past test results, manufacturing data provided by the company, and other relevant information.

### **Testing in Response to a Material Change**

Within fifteen days of the reformulation of any paint product the manufacturer shall provide a notification to the certification body along with a sample of the newly formulated paint. Samples shall be selected by the manufacturer to be representative of all similar production lots produced since the material change has occurred. Samples of recently reformulated certified paint products must be submitted to the certification body for testing following the same requirements as for initial paint analysis, section III.

A paint formulation is considered to undergo a "material change" when the concentration of any ingredient increases or decreases by 5 percent by weight or volume (except the diluent) and/or a different pigment, filler, binder or drier is used in formulating the product. The change of an ingredient supplier without changing the chemical formula of the pigment, filler, binder or drier does not constitute a "material change" for this purpose. A change in the concentration of any existing ingredient does not constitute a material change.

### **Testing in Response to a Failure**

In the event that a sample exceeds the lead content criteria specified in the Lead Safe Paint Certification Standard, the certification body must take immediate action to notify

the product manufacturer and to retest the paint from the same container within 10 days of the receipt of the result from the laboratory. If the second sample from the paint container fails, the certification body shall institute the following measures for a confirmed failure to provide adequate assurance that paint formulation procedures are adequate:

- a) Notify the manufacturer of the sample failure.
- b) Request the manufacturer to provide the locations where the paint is being sold.
- c) Increase the frequency and number of samples to be collected and analyzed for ongoing surveillance.
- d) Issue a suspension notice outlining the steps leading to the cancellation of certificate. (See suspension section and requirements below.)
- e) Stop the distribution and sale of all the production lots of paint prepared from the failing raw material that remain in stock which are labeled as certified product.
- f) The certification body shall assess the manufacturer for additional charges for the collection, sample preparation, and analysis based on the predetermined fee schedule.

The certification body may also decide to institute additional measures which may include:

1. Require the paint company to investigate and identify which of the raw material was responsible for increasing the lead content in the failing production lots of paint and identify all other production lots of paint manufactured from that raw material.
2. Identify all production lots of paints manufactured with the same raw material and test additional samples from these production lots in the custody of the Manufacturer;
3. Manufacturer must suspend the use of the remaining production lot of the raw material, if any.
4. Request additional information from the paint manufacturer about quality control practices, procurement, root cause analysis or other relevant records to better evaluate the manufacturer.
5. Recall the offending production lots from the market, following the requirements below.

## Suspension

The certification body shall issue instructions to the certified paint manufacturer for suspension of certification when:

- a) One or more samples that have been confirmed with a re-analysis, fail to conform to the lead content requirements; or
- b) Repeated failure of the certified paint manufacturer to take actions within the time limits prescribed to correct or respond to any failures identified.

The certification body shall issue due notice of 60 days for suspension of certification to the manufacturing units. In the event of detected fraud on the part of the certified paint manufacturer (including any deliberate attempt to circumvent or disregard any certification requirements), the advance notice may be waived.

Unless revoked, within 60 days of the notice of suspension, the certified paint manufacturer shall suspend the use of the certification mark under this scheme on the relevant paint products manufactured under the provisions of the scheme.

When certification is suspended and for the duration of the period of suspension, the certified paint manufacturer shall:

- make no misleading claims,
- advise existing and potential purchasers of the suspension status of certification, and
- cease to use the certification mark on the product labels and in communications.

## Stop Distribution of Defective Paints

While under suspension, the certification body shall ensure that any certified paint products in its possession not be distributed or sold to any customers until the product in stock has been reassessed by the certification body for conformity to the certification criteria.

The information about the suspension and withdrawal/ cancellation of certification shall be made publicly available by the certification body on its website.

The certification body shall revoke suspension only when:

- a) Corrective actions have been taken and verified by the certification body.
- b) Results of samples of paints manufactured subsequent to the implementation of corrective actions conform to certification criteria requirements.

Suspension shall not exceed a period of six months. The paint manufacturer's inability to resolve issues relating to suspension within this period shall lead to cancellation of certification.

## Recall of Defective Paints

Product recalls are issued when product is mislabeled or otherwise misleading to the market and/or end-consumer as meeting the Lead Safe certification criteria. After consultation with the technical advisory committee, the certification body shall inform the manufacturer when a recall is necessary to ensure the integrity of the certification.

The manufacturer shall provide a written plan for approval of the certification body within seven days. The plan may include consumer notifications or other corrective action measures which must be implemented immediately following the approval of the certification body.

In the event of a recall, the certification body shall ensure that the paint manufacturer has product recall procedures in place in order to effectively document and ensure that the defective certified paint product(s) is recalled. Records attesting to these measures shall be provided to the certification body for review upon request.

#### **V. Sampling Strategy for Ongoing Surveillance**

A specific sampling plan will be developed by the certification body for each paint brand based on the paint categories that are certified under the Lead Safe Paint Certification Standard. Paint samples will be selected for analysis with a stratified sampling strategy based on the main paint diluent and the paint color.

Products will be purchased according to the specified stratified sampling plan for each certified brand, with an attempt to select samples from unique production lot based on the lot numbers and/or date codes provided on the label.

Colors will be selected with an emphasis on bright colors such as red, yellow and orange paints, although an attempt should be made to be as inclusive as possible to include the largest number of colors available with the total number of samples as the limiting condition.

The main diluent of the paint shall be considered in an attempt to over-sample oil-based paints relative to water-based paints from the same manufacturer. In cases where the certified brand includes both types, attempt shall be made to sample oil-based paints at a ratio of 3:1 to water-based paints. The certification body shall keep an annual log of all samples tested from each brand indicating the number of oil and water-based paints.

The following describes the general strategy for designing the sampling plan and the total number of samples that shall be collected each year based on production volume information provided by the paint manufacturer. Certified paint companies will be required to provide production data to the certification body indicating the categorical range of production for each brand and product line.

The sampling scheme outlined here is designed to reject an entire production lot of paint if any one sample exceeds the criteria set in the Lead Safe Paint Certification Standard for lead content, following a confirmatory test.

The table below indicates the number of samples required for an acceptable quality level utilized in manufacturing quality control that is intended to test if a single production lot meets the criteria for a major "defect". Certification bodies will use Table I to determine the appropriate number of samples from each brand of paint products to test over the course of a year, based on the production volume reported by the manufacturer over the previous year. The minimum number of samples based on the annual production volume of the paint manufacturer is shown:



Table I: Minimum Number of Paint Samples to Test per Year for Participating Manufacturer for Ongoing Surveillance:

Production Volume (liters/year)	Number of Samples
1 to 50	5
51-90	7
91-150	11
151-280	13
281-500	16
501-1200	19
1201-3200	23
3201-10,000	29
10,001-35,000	35
35,001-& Over	40

Note that if a brand with certification makes fewer certified products than the specified number of samples indicated in Table I, then one hundred percent testing of all available products under that brand is required for ongoing surveillance.

## VI. Sample Preparation

Samples collected according to the procedures outlined above shall be dried and analyzed for lead content. Sample preparation may be conducted by the certification body, an accredited laboratory or another third party providing such services. In the event that this service is contracted to a third party other than an accredited laboratory, the service provider shall be required to provide a written Standard Operating Procedure for paint testing to the certification body and to provide a signed declaration that it was followed. Samples shall be prepared as described to measure for total lead (i.e. the percent of lead by weight in the paint) under the Lead Safe Paint Certification Standard.

Supplies needed for sample preparation of new “wet” paint:

1. Glass plates measuring approximately 30 cm X 30 cm
2. Paint brushes or paint applicator – one disposable brush/applicator for each sample
3. Drying rack suitable for storing or air drying paint on glass slides without cross-contamination
4. Razor blades (with scraper/ holder)
5. Disposable (medical type/latex/plastic) gloves without powder for use during sample collection to prevent contamination and other personal protective equipment (apron, coverall, etc.)
6. White (print free) lead-free paper
7. Plastic sheeting
8. Tape
9. Plastic zip-lock bags with preprinted label (small size approximately 10 cm X 10 cm).

10. Sample log form
11. Paints to sample
12. Solvent for cleaning
13. Low temperature oven (optional)

**Method for collecting paint samples:**

1. Wearing gloves, apply a thin, single coating of paint to a glass slide. Use a new brush/ applicator and a new pair of gloves for each paint sample to avoid cross-contamination.
2. Dry glass on rack in an open, well ventilated area, for 3-5 days until the material is completely dry (use gloves to touch paint). Alternatively, samples can be dried in an oven nominally 105 °C (105 °C + 2 °C) for a minimum of 30 minutes or until completely dry. A sample dried in an oven is considered completely dry when the weight of the sample (and glass) is stable over at least two successive readings separated by 30 minutes in the oven.
3. After the drying is complete, cover a flat work surface (table or counter) with one sheet of clean plastic secured in place with tape.
4. Wearing gloves, use a razor blade to scrape the dried paint
5. off of the glass onto a sheet of print-free, lead-free paper making sure to collect all paint and dust particles.
6. Any particles that fall off of the paper onto the plastic sheeting should be picked up with the edge of the paper and included in the sample.
7. Split the dried scraped samples into two sets (one for analysis and other as backup to be kept in the organization).
8. Carefully fold the sheet of paper and place the one end in a pre-labeled plastic, zip-lock bag for shipping.
9. Fill out the sample log.
10. Clean glass and razor blade with solvent, dry for re-use at another time.
11. Dispose of plastic sheeting on work surfaces and replace with a new sheet for each sample.
12. Wash hands and use a new pair of gloves for each sample.
13. Complete required shipping documents. Do not label package as hazardous material. Instead call it "paint color samples" on shipping documents.

**VII. Laboratory Qualifications**

Paint samples shall be analyzed for lead by a laboratory recognized by the U.S. National Lead Laboratory Accreditation Program (NLLAP) for analysis of lead in paint. To obtain NLLAP recognition, a laboratory must also participate in the Proficiency Analytical Testing program (PAT) program. Currently this is the only ongoing proficiency testing program that is specific to lead in paint that is operational and available to private and public laboratories worldwide. The program is currently being run by the American Industrial Hygiene Association (AIHA) which is an independent non-governmental organization.

NLLAP-recognized laboratories are required to use the same analytical methods for analyzing samples that they used to obtain NLLAP recognition. If in the future another equivalent proficiency testing program for lead paint samples is launched, the testing protocol can be expanded to reference laboratories under that program.

In addition to participation in the ELLAPP Program, laboratories must also demonstrate that they meet specified minimum qualifications for:

- a. Personnel (experience and training)
- b. Quality Assurance Program (with specified frequency of analyzing spike and reference samples)
- c. Analytical method documentation
- d. Facility and equipment review

### VIII. Laboratory Testing

The testing protocol requires the use of laboratory testing. The specific analytical method to be used by the laboratory may vary depending upon equipment availability and other factors.

In the laboratory, paint samples must first be prepared with acid digestion. The actual analysis can be conducted using different techniques, including flame atomic absorption spectrometry (FAAS), graphite furnace atomic absorption spectrometry (GFAAS) and inductively coupled plasma atomic emission spectrometry (ICP-AES). Guidelines, recommendations and standard operating procedures for sample preparation and analysis using these and other methods are available from numerous sources, including governments and international standards agencies. All of the published methods listed below are adequate to determine lead in paint with commonly required limits of detection and accuracy as long as guidelines, standard operating procedures and strict QA measures are followed.

- ASTM F963 - 11 Standard consumer safety specification for toy safety. West Conshohocken, PA, ASTM International, 2008 (<http://www.astm.org/Standards/F963.htm>).
- Pb-based paint laboratory operations guidelines: Analysis of Pb in paint, dust, and soil. Revision 1.0. Washington, DC, United States Environmental Protection Agency, Office of Pollution Prevention and Toxics, 1993 (EPA 747-R-92-006; <http://www2.epa.gov/sites/production/files/documents/92-006.pdf>).
- ASTM E1645 - 01(2007) Standard practice for preparation of dried paint samples by hotplate or microwave digestion for subsequent lead analysis. West Conshohocken, PA, ASTM International, 2007 (<http://www.astm.org/Standards/E1645.htm>).
- Binstock D et al. Standard operating procedures for lead in paint by hotplate- or microwave-based acid digestions and atomic absorption or inductively coupled plasma emission spectrometry. Research Triangle Park, NC, United States Environmental Protection Agency, 1991 (<http://www.cem.de/documents/pdf/publikation/digestion/RD046.PDF>).
- 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. West Conshohocken, PA, ASTM International, 2012 (<http://www.astm.org/Standards/E1613.htm>).
- Test method: CPSC-CH-E1003-09: Standard operating procedure for determining lead (Pb) in paint and other similar surface coatings. Gaithersburg, MD, United States

- Consumer Product Safety Commission, April 2009  
(<http://www.cpsc.gov/PageFiles/128129/CPSC-CH-E1003-09.pdf>)

## **IX. Laboratory Quality Assurance Procedures**

Approved laboratories should maintain a written Quality Assurance Program or Standard Operating Procedure (SOP) that accurately reflects the specific analytical procedures used for lead paint testing. The SOP should outline the instrument calibration procedures and standards. It would also address data validation, reporting and verification processes. The laboratory shall ensure that the SOP is reviewed annually and revised as changes are made.

The laboratory SOP should also outline specific procedures for sample in-take and handling to include:

- Steps to maintain the integrity of all samples, (e.g., by tracking samples from receipt by laboratory through analysis to disposal); and
- Required Chain-of-Custody procedures.

The type of quality control (QC) checks and the frequency of their use shall also be specified in the SOP. This shall include the following:

- instrument performance check standards;
- frequency and acceptability of method detection limit (MDL) calculations;
- frequency and acceptability of demonstration of low level capability;
- calibration, internal and surrogate standards;
- quality control and proficiency testing samples; and
- laboratory blank and laboratory sample matrix replicates.

## **X. Records and Reporting**

The certification body and assigned testing laboratories shall keep all materials confidential. To ensure confidentiality all employees and contractors with access to records under this certification program shall sign a confidentiality agreement outlining their legal responsibilities.

The certification body shall have a document retention policy in place mandating that all records be kept on file for six years. Such records shall include:

- a) Application information, forms, and results of application review;
- b) Test reports from independent laboratory and chain of custody documentation;
- c) Records of review and certification decisions;
- d) Certification agreements;
- e) Certification documentation (e.g. certificates), including the scope of certification;
- f) Records of complaints, suspensions, appeals, and any subsequent correction or corrective actions;
- g) Copies of sampling plans developed for specific paint companies/brands.
- h) Any other records as relevant to the certification process. Laboratories shall maintain records with the following information:

- a. Unique sample identification numbers;
- b. Date and time;
- c. Source of samples; and the
- d. Name of sample collector(s) and name of the analyst.

The certification body shall document the name of the person or committee who was authorized to issue a certification to the successful applicant paint company. The certification body will issue a certificate to the applicant and inform them of the results of the testing within 15 days of receipt from the laboratory.

The certificate shall contain the following information:

- a) the name and address of the certification body.
- b) the name and address of the paint manufacturer and the address of the site certified.
- c) the effective date (the date on which certification is granted, which shall not precede the date on which the certification decision was completed) and the expiry date of certification.
- d) the expiry date or recertification due date consistent with the three year recertification cycle.
- e) the scope of certification including products certified and reference to the Lead Safe Paint Certification Standard against which the certification has been awarded. (Reference to the standard shall include issue date and/or revision date, used for evaluation of the certified paint manufacturer.)
- f) In the event of issuing any revised certification documents, a means to distinguish the revised documents from any prior obsolete documents.
- g) The certificate shall state: "The issuance of this certificate does not authorize or grant permission to display the certification mark logo on product packaging or in any communications. A license to display the logo must be obtained from IPEN or its designated representative.
- h) The formal certification documentation shall include the signature of the individual(s) of the certification body assigned this responsibility.

Note: A copy of every certification certificate must be forwarded to IPEN or its designated representative within 24 hours of its issuance.

### **Renewal of certification**

The certification shall be renewed at the expiration date at end of the three-year validity. However the renewal application must be made at least three months prior and the renewal of certification decision shall be taken on or before the certificate expiration date.

### **Cancellation of Certification**

Certification body shall cancel the certificate when the certified paint manufacturer violates the terms and conditions of certification and/or provisions of the license agreement for Lead Safe paints. Such violations may include:

- a) Repeated failures of test samples, suspension of certificate beyond the stipulated period, inadequate corrective actions, or misuse of the certification mark.

- b) Repeated non-compliance of certified Paint products to the certification criteria and the inability of the corrective actions taken to ensure compliance within 6-month suspension.
- c) The certificate has remained under suspension without resolution for more than six months.
- d) The certification body shall cancel the certificate at the request of the certified paint manufacturer, if the operation(s) in the certified units premises can no longer be carried due to reasons of natural calamities such as flood, fire, earthquake etc., lock out declared by the management, or closure of business operations, or management decision not to manufacture paints under the Lead Safe Paint Certification Standard.

### **Annual Notice**

The participating paint company shall provide an annual notice certifying the production volume (in ranges) for each product or paint category manufactured under the certified brand. In addition, any major changes in distribution, manufacturing location, or other significant changes must be reported on the annual notice form.

### **XI. Miscellaneous**

Tinting products are sometimes manufactured and distributed to authorized retail outlets where paint products are mixed to make specific colors. If certified tinting products of the same brand are added to certified base paints from those brands by authorized distributors, then all resulting paint products/ colors are considered certified without additional testing.

In some cases, paint manufacturers may make custom colors to meet customer requirements. If two or more certified products are combined without any additional ingredients to make a new product color then the resulting paint or coating shall be considered certified without additional testing.

## Appendix A

### Chain of custody procedures

It is important that the documentation provide a complete record of all personnel involved in preparing samples and transmitting them to the certification body and/or testing laboratory. These records accompanying each shipment of paint samples should be completed at the time the sample is collected and should be signed or initialed, including the date and time, and name of the sample collector(s).

1. The record for each sample should contain the following information:
  - a. Unique sample or log number;
  - b. Date and time;
  - c. Source of sample (including each facility location);
2. Each sample is identified by affixing a pressure sensitive gummed label or standardized tag on the paint container(s). This label should contain the sample number and the collector's initials. The analysis required should be identified. Where a label is not available, the sample information should be written on the sample container with an indelible marking pen.
3. The closed sample container should then be placed in a transportation case along with the chain-of-custody record form and pertinent shipping records. The transportation case should then be sealed and labeled. All records should be filled out legibly in waterproof pen.

### Transfer of Custody and Shipment

1. When transferring the possession of the samples, the transferee must sign and record the date and time on the chain-of-custody form. Custody transfers, if made to a sample custodian in the field, should account for each individual sample, although samples may be transferred as a group. Every person who takes custody must fill in the appropriate section of the chain-of-custody record.
2. The field custodian (or field sampler if a custodian has not been assigned) is responsible for properly packaging and dispatching samples to the appropriate laboratory for analysis. This responsibility includes filling out, dating, and signing the appropriate portion of the chain-of-custody record.
3. All packages sent to the laboratory should be accompanied by the chain-of-custody record and other pertinent forms. A copy of these forms should be retained by the field custodian. Samples not accompanied by the chain-of-custody will be rejected and not be sampled.
4. Packages sent by post or with a delivery service should be registered, tracked, and require a proof of receipt. If packages are sent by common carrier, receipts and tracking information should be retained as part of the permanent chain-of-custody documentation.
5. Samples to be transported must be packed to prevent breakage.

6. If the field sampler delivers samples to the laboratory, custody may be relinquished to laboratory personnel. If appropriate personnel are not present to receive the samples, they should be locked in a designated area of the laboratory to prevent tampering. The person delivering the samples should make an entry on the chain of custody log stating where and how the samples were delivered and secured. Laboratory personnel may then receive custody by noting on the chain of custody log the absence of evidence of tampering and signing the custody sheet.

### **Laboratory Sample Control Procedures**

Sample control procedures are necessary in the laboratory from the time of sample receipt to the time the sample is discarded. The following procedures are recommended for the testing laboratory:

1. A specific person must be designated as custodian and an alternate designated to act as custodian in the custodian's absence. All incoming samples must be received by the custodian, who must indicate receipt by signing the accompanying custody/control forms and who must retain the signed forms as permanent records.
2. The custodian must maintain a permanent logbook to record, for each sample, the person delivering the sample, the person receiving the sample, date and time received, source of sample, date the sample was taken, sample identification log number, how transmitted to the laboratory, and condition received (sealed,
3. unsealed, broken container, or other pertinent remarks). This log should also show the movement of each sample within the laboratory; i.e., who removed the sample from the custody area, when it was removed, when it was returned, and when it was destroyed. A standardized format should be established for logbook entries.
4. A clean, dry, isolated room, building, and/or refrigerated space that can be securely locked from the outside must be designated as a "custody room."
5. The laboratory must be maintained as a secured area, restricted to authorized personnel only. Laboratory personnel are
6. responsible for the care and custody of the sample once it is received by them and must be prepared to testify that the sample
7. was in their possession and view or secured in the laboratory at all times from the moment it was received from the custodian until the time that the analyses are completed.
8. Once the sample analyses are completed, the unused portion of the sample, together with all identifying labels, must be returned to the custodian. The returned tagged sample must be retained in the custody room.
9. Samples will be destroyed (or recycled) only upon the order of the responsible certification body.