



Our mission is to provide the highest level of safety, and to protect public health and the environment from toxic harm.

April 22, 2010

Last Updated February 2012

Interim Drinking Water Plumbing Products Sampling and Evaluation Strategy and Procedures

1. Introduction

As part of its ongoing program to reduce toxic substances from the environment, the Department of Toxic Substances Control (DTSC) conducts monitoring and testing of lead content in plumbing products. Specifically, Health and Safety Code (HSC) Section 25214.4.3 requires DTSC, based on resources available, to annually select up to 75 drinking water faucets or other drinking water plumbing fittings and fixtures for testing and evaluation with lead plumbing standards set forth in HSC Section 116875. HSC Section 25214.4.3 also requires DTSC to acquire its plumbing product samples from locations that are readily accessible to the public at either retail or wholesale sources.

This document outlines DTSC's general strategy for sampling selection, collection, analysis, and reporting of the lead content in selected plumbing products used to convey drinking water. The collected samples will be analyzed by DTSC Environmental Chemical Laboratory (ECL) using the testing protocol document "Testing and Evaluation of Lead Content in Plumbing Products, Materials, and Components" (DTSC August 2009 factsheet). Results from the collection and analysis will be summarized in an evaluation report, which will be posted on DTSC's website and submitted to the California Department of Public Health (DPH).

Every effort will be made to follow the sampling and testing strategy outlined in this document, however, deviations may be necessary based on actual field conditions and observations.

2. Plumbing Product Sample Collection and Laboratory Procedures

a). Selection of Plumbing Products and Locations for Sample

DTSC will exercise professional judgment regarding the strategy for selecting plumbing fittings and fixtures to sample. Factors that DTSC will consider in selecting locations and plumbing products for testing include, but are not limited to the following:





Our mission is to provide the highest level of safety, and to protect public health and the environment from toxic harm.

- Whether the plumbing product may be reasonably described as conveying drinking water through cooking or drinking using information accessible to the general consumer such as:
 - Labeling/packaging information (e.g., plumbing product descriptions)
 - Plumbing product display information at the retail or wholesale source
- Whether the retail or public wholesale sources, which may include internet sources, are readily accessible to California residents
- Geographic locations of the retail or wholesale sources
- Whether the plumbing product is likely to contain lead (e.g. brass or chrome-plated brass components) in wetted surface
- Consideration of portable X-ray fluorescence (XRF) equipment for preliminary screening in the field
- Plumbing product's certification status
- Other relevant information

b). Plumbing Product Sample Collection, Notification, and Initial Evaluation

Collection:

- Using chain-of-custody to ensure plumbing product sample integrity, obtain a minimum of two duplicate products for the same brand, model and barcode
- Obtain all product markings or labels that allow the identification of manufacturer, distributor, or importer
- Request and obtain from the retailer or wholesaler source any further contact information of manufacturer, distributor or importer of the collected product
- Document each sampling event with a narrative report in a uniform format to ensure statewide consistency

Notification:

- Make best effort to identify manufacturer and/or distributor contact information (e.g., contact address, phone number, etc.) and notify each manufacturer and/or distributor in a timely matter after product collection
- Include in manufacturer/distributor notification the labels and markings obtained during product collection
- Request from manufacturer and/or distributor any relevant product information

Initial Evaluation:

- Preserving the chain of custody, disassemble plumbing products and identify the components that directly contact water during use (aka, the "wetted components")





Our mission is to provide the highest level of safety, and to protect public health and the environment from toxic harm.

- Identify the wetted components of the disassembled plumbing product with a unique component number, linking the component to the specific disassembled plumbing product, and document
- Measure and calculate each unique wetted component's wetted surface area

c). Phase I Laboratory Screening

- ECL may conduct XRF screening for certain types of unique wetted components
- Document XRF results in spreadsheet

Using professional judgment and the results from the Phase I screening, determine for each plumbing product collected whether its complete set of disassembled plumbing wetted components will be analyzed as part of the Phase II Laboratory Analytical Testing.

d). Phase II Laboratory Analytical Testing

- ECL will conduct analytical testing of lead using U.S. EPA SW-846 Test Methods 3050B, 3052, 6010C or equivalent testing methods as described in the DTSC August 2009 factsheet
- Document analytical results in spreadsheet

3. Evaluating Testing Results and Reporting

a). Evaluating Test Results:

- Compile and evaluate analytical data received from ECL
- Using the formulas outlined in DTSC August 2009 factsheet, calculate the weighted average lead content for each plumbing product collected
- Document any deviation from DTSC's specified procedures
- Compare the calculated weighted average lead content with the statutory threshold found in HSC Section 116875

b). Notification:

- DTSC may notify manufacturers or distributors of the testing results
- The level of interaction DTSC will have with manufacturers, distributors, importers, wholesalers, retailers and/or certifiers will be made on a case-by-case basis

c). Reporting:

- Document the testing and evaluation done for the monitoring program conducted in an annual evaluation report
- Transmit evaluation report to DPH
- Post evaluation report on DTSC Lead in Plumbing web site

