



Fermilab
ES&H Section

INDUSTRIAL HYGIENE PROCEDURES

WIPE SAMPLING

August 1, 2003

PURPOSE

To provide uniform procedures for the collection of wipe samples. Wipe samples are taken to determine the degree of surface contamination and provide information on employee exposure. They are usually taken for lead and beryllium.

EQUIPMENT

- NATLSCO Supplied Filter Wipe (Ghost Wipes)
- Distilled Water, if necessary
- IH Sampling Notes Form
- Disposable Gloves
- Permanent Marker
- Tape Measure
- Template, plastic or steel; 10 cm X 10 cm
- Masking Tape
- Engineering Drawings (optional)

PROCEDURE

1. Prepare a sketch of the area or utilize engineering drawings or provide a thorough description of the area.
2. A new set of gloves should be used for each wipe sample taken.
3. With gloves on, remove the filter from the plastic bag and unfold it.
4. If necessary, moisten the filter with distilled water. Add just enough to moisten the filter. Unfold the filter.

Note: Ghost Wipes are pre-moistened.

5. Place the template over the area to be sampled, and secure the outside edges with masking tape. If a template is not available or cannot be used, measure the sampling area with the tape measure, and delineate the area to be sampled with masking tape. Wipe an area of 100 square centimeters. If the surface is smaller than this, wipe as much area as possible and document the area. For curved surface, the wiped area should be estimated as accurately as possible.

Note: Ghost Wipes are 100 square centimeters. So simply place the filter in the area to be wipe tested and gently press down the four corners to outline the 100 square centimeters to be sampled.

6. Re-fold the wipe into fourths, and wipe the surface to be sampled with firm pressure. Use an overlapping "S" pattern to cover the entire surface area with horizontal strokes.
7. Fold the exposed side of the wipe in, and wipe the same area using vertical "S" strokes.
8. Fold the wipe once more to reveal an unexposed surface, and wipe the surface a third time as described in step 7.
9. Without allowing the filter to contact any other surface, fold the filter and place it inside the plastic bag. Fold the wipe, exposed side in, and place back into its package. Seal securely, and clearly label the sample container.

10. Clean the template (if used) in preparation for the next wipe sample.
11. Discard gloves.
12. Field Blanks: Submit 5% of samples, at least one blank filter for the set of submitted samples. Remove unexposed wipes from their packaging and place into sample package.
13. Record information on IH Sampling Notes Form and enter results into IH Sampling Database.
14. For Lead Clearance sampling procedures see FESHM Chapter 5052.3 for details.