

Standard Operating Procedure – Collecting Dust Wipe Samples for Metals and PAH Analysis

USEPA Region 5 – January 8, 2014

1. This method is used to sample dust from smooth nonporous surfaces using a solvent-wetted wipe. Appropriate surfaces include metal, glass, painted or sealed surfaces, and tile. Sampling is not advised on rough or porous surfaces such as upholstery, carpeting, brick, rough concrete, and bare wood. Sampling of horizontal surfaces is preferred however vertical surfaces with heavy deposition may also be acceptable.
2. Materials to be provided by EPA-CRL:
 - Disposable nitrile/neoprene gloves
 - Solvent-wetted wipes – Ghost Wipes for metals and Allegro pads for PAHs
 - Disposable 100cm² manila sampling templates
 - Sample containers – 4 ounce glass jars
 - Sample labels
 - Chain-of-custody forms
 - Plastic sample bags
 - Sample cooler with bags of ice

Materials to be provided by field personnel:

- Field logbook
 - Blue painter's tape
 - Camera
 - Time-piece
3. Before going to the field, check that all necessary materials are assembled.
 4. Upon arriving at the sampling site, record relevant information on sample labels, chain-of-custody forms, AND in the logbook. Relevant information is the field collector's name, site name/location, sample date, sample time, sample ID number, and type of analysis to be performed (metals or PAHs).
 5. If possible, one member of the field sampling team should take all the notes and photographs and provide other sampling support activities, while the other member(s) collect the samples.
 6. Take a photograph of the surface to be sampled. Write in the logbook what was in the photograph and the direction the camera was facing. Also note any relevant local observations (possibilities include weather conditions, road work, landscaping, painting, etc).
 7. Put on a pair of disposable gloves and install the two sampling templates side-by-side, securing them with blue painter's tape.
 8. Open the Ghost Wipe package and remove the water-moistened sampling media.
 9. Wipe the entire surface within the first template using firm strokes by pressing with the fingertips. Wipe vertically first, fold the wipe in half, placing the dirty side inside, and then wipe a second time horizontally to ensure that you get complete coverage. If the area is heavily contaminated and the wipe becomes extremely soiled, refold the wipe, exposing the clean side, additional times as needed. Take care not to wipe the blue adhesive tape.
 10. Put the wipe into the sample jar and seal the cap.
 11. Affix the label to the jar.
 12. Place the sample jar inside of a sealed plastic bag. Place the bagged sample into the cooler.
 13. Put on a fresh pair of gloves. Open the alcohol-moistened Allegro pad and repeat steps 9-12 on the second template. The alcohol evaporates in about 30 seconds, so it is important to move quickly and efficiently.

14. Remove the two templates and tape. Dispose of this waste material, sample wipe packages, template bags, and used gloves.
15. Collect a set of field blanks at one out of each three sampling locations. A blank sample will consist of one metals and one PAH sample which MUST NOT touch the sampling surface. Put on a fresh pair of gloves. Open up one sampling template and one Ghost Wipe. Wipe along one edge of the template, fold the Ghost Wipe, and then wipe along a second edge of the template.
16. Put the blank wipe into a sample jar and affix the label. Place the jar in a sealed plastic bag and inside of the cooler.
17. Put on a fresh pair of gloves. Repeat steps 15-16 with a new template and an Allegra pad.
18. Dispose of sample wipe packages, template bags, and used gloves.
19. Ensure that all labels, chain-of-custody forms, and the logbook are filled out for samples and blanks. Ensure that jars are marked for metals or PAHs and that unique sample ID codes distinguish between different residential sampling locations.
20. Cover the samples with ice, then close and secure the cooler for transport.
21. Return samples to Robert Snyder at CRL, 536 S. Clark St.-10th Floor, within 24 hours of collection.