

The Children's Total Exposure to Persistent Pesticides and Other Persistent Organic Pollutants (CTEPP) Study

Storing Study Samples

Battelle
Columbus, OH 43201
Contract No. 68-D-99-011

Standard Operating Procedure

CTEPP-SOP-3.10

Title: Storing Study Samples

Source: Battelle

U.S. Environmental Protection Agency
Office of Research and Development
Human Exposure & Atmospheric Sciences Division
Exposure Measurements & Analysis Branch

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STANDARD OPERATING PROCEDURE (SOP)
FOR STORING STUDY SAMPLES

Prepared by: _____	Date: _____
Reviewed by: _____	Date: _____
Approved by: _____	Date: _____
Approved by: _____	Date: _____
Approved by: _____	Date: _____

1.0 Scope and Applicability

This standard operating procedure (SOP) describes the method for storing study samples.

2.0 Summary of Method

Study samples require temporary and long-term storage. Specific methods are described in the procedure section.

3.0 Definition

- 3.1 Temporary Storage: Storage of samples for no more than seven days.
Temporary storage is needed under the following conditions: (1) during the field sampling period when the samples are being collected, (2) after the samples are collected and before they are shipped to the Battelle Columbus Laboratory, and (3) during shipping.
- 3.2 Long-term Storage: Storage of samples for more than seven days.
Long-term storage is needed after the samples arrive at the laboratory.

4.0 Cautions

Samples must be stored according to the SOP to prevent any loss (or degradation) of samples.

5.0 Responsibilities

- 5.1 Field staff, laboratory staff, and the assigned staff are responsible for storing the samples properly.
- 5.2 Study participants will be trained to temporarily store the samples (food, urine, and hand wipes) on site during the 48-hour sampling period.

6.0 Apparatus and Materials

- 6.1 Freezers
- 6.2 Coolers
- 6.3 Dry ice
- 6.4 Blue ice packs
- 6.5 Storage containers

6.6 Bubble wraps

6.7 Ziploc bags

7.0 Procedure

7.1 Temporary Storage

7.1.1 At the sampling site and during transport from the collection site to the temporary storage location, all samples (air, food, urine, dust, soil, surface wipe, hand wipe) and transferable residues (PUF roller: if collected) will be individually wrapped and stored in coolers with chilled blue ice packs and kept cold at all times. Separate coolers will store different types of samples.

7.1.2 During transport, glass sample containers will be individually wrapped with bubble wrap to reduce the chance of breakage.

7.1.3 Once the coolers containing the samples are transported to the temporary storage location, the samples will be checked, logged into the Chain-of-Custody (CoC) form, and stored in a freezer at or below -10°C until they are shipped to Battelle Columbus Laboratory. The temperature of the freezer is monitored daily and recorded in a temperature log during the working days.

7.2 Long-term Storage

7.2.1 Samples will be packed in dry ice and shipped to Battelle Columbus Laboratory for analysis and long-term storage. The sample shipping procedures are described in CTEPP-SOP-3.11.

7.2.2 Once the samples arrive at Battelle Columbus Laboratory, the samples will be logged in by the laboratory sample custodian for long-term storage. Sample storage at the laboratory will take place in freezers maintained at -10°C or colder. Temperature checks will be performed daily and recorded for all freezers. Samples will be double bagged for storage to avoid potential cross contamination.

7.2.3 Samples are to be stored until sample preparation. The CoC forms will be used to document these activities. All freezers will be located in a secure and uncontaminated laboratory with limited access. Only authorized project personnel, the laboratory sample custodian, or his/her designate will be allowed to access the freezers.

8.0 Records

Sample storage records will be stored with the project files. Electronic files will be stored in the field sampling folders and archived on a CD ROM after the project is completed. All electronic files will be protected by passwords. Only authorized project personnel will be allowed to access the files.

9.0 Quality Control and Quality Assurance

The CoC Records will be used for storing and handling the samples. The Field QA Officer or designee, Field Team Leader, and the Task Order Leader will routinely check the condition of the samples in temporary and long-term storage.

10.0 Reference

Not applicable.