

Head Patch Samples
Chapter 8: MATRIX SAMPLES
AHETF-8.H.1.

Effective Date : April 1, 2003

| | |
|---|--|
| <p>APPROVAL <u><i>David Johnson</i></u></p> <p>APPROVAL <u><i>Wicky Sandau</i></u></p> <p>Last Revision Date: September 1, 2003</p> | <p>DATE <u><i>03/18/04</i></u></p> <p>DATE <u><i>03/23/04</i></u></p> <p>Previous Version Number: 8.H.0.</p> |
|---|--|

1.0 PURPOSE AND SCOPE

- 1.1 This Standard Operating Procedure (SOP) describes procedures for collecting pesticide residues from workers' head during the Agricultural Handlers Exposure Task Force (AHETF) worker exposure studies.
- 1.2 This SOP was revised to clarify that multiple head patch samples from a single worker will be combined rather than collected separately, in section 5.2.

2.0 EQUIPMENT REQUIRED

- 2.1 The following materials are required for collecting head patch samples:
 - a. cotton dosimeter (1 layer, 100 cm² for inner & 50 cm² for outer)
 - b. Disposable gloves (i.e., latex)
 - c. Aluminum foil
 - d. Resealable bags or glass jars
 - e. Cooler with dry ice or a freezer
 - f. Suitable mechanism for attaching patch to worker's head and outside of hat or chemical resistant (CR) headgear

3.0 PATCH PLACEMENT

- 3.1 The inner head patch will be placed at the crown of head, and the edges must not extend beyond the coverage provided by the hat or CR headgear. The inner patch will be secured to the worker's head via nonabsorbent cord(s), which will be cut off during collection.
- 3.2 The outer head patch will be placed on the top of the hat or CR headgear in a manner that will not compromise the integrity of the hat and will remain securely attached even if wet. Portions of the patch where it attaches to the headgear/hat will be cut off during collection.

4.0 SAMPLING PROCEDURE

- 4.1 The field personnel collecting samples will wear clean, disposable gloves while collecting these patch samples.
- 4.2 The head patches will be collected after the field research personnel have checked the air pump flow rate and collected the OVS tube sample.
- 4.3 Outer head patch(s) attached to the workers' hat or CR headgear will be removed by the research personnel after the worker removes their headgear. Using clean scissors cut the outer head patch along the prescribed lines prior to placing in the sample container. Wrap the patch in aluminum foil and place it in the appropriately labeled container, close the container, and then place in frozen storage. Research personnel must change gloves after handling the outer head patch.
- 4.4 After the worker has removed their hat or CR headgear, the inner head patch from the worker's head will be removed by the field research personnel. Research personnel must wear clean gloves to collect the inner head patch. Cut the cord(s) used to secure the patch to the worker's head and discard before placing the inner head patch in a sample container. Wrap the patch in aluminum foil and place it in the appropriately labeled container, close the container, and then place in frozen storage.

5.0 SAMPLING INTERVALS

- 5.1 One inner and outer head patch sample will be collected from each worker at the end of the replicate.
- 5.2 Should it become necessary to replace an inner or outer head patch sample during a replicate, the worker will be taken to a clean area, the existing patch will be properly collected as described in section 3.0, and a replacement patch placed on the worker. All additional patches will be documented in the raw data, and multiple head patches will be combined in one container. The total number of patches in a sample should be noted for the analytical laboratory.

6.0 FIELD STORAGE

- 6.1 Place samples collected during the study in the field in a cooler with dry ice or portable freezer until processed and placed into frozen storage for shipping at the end of the monitoring day (or as soon as practical). If dry ice is not available, the Study Director must be notified before sample collection and other suitable storage conditions must be noted in the raw data.