GUIDELINES FOR IODINATIONS

The following guidelines and requirements are put forth to aid the investigator in establishing safe iodination procedures and complying with existing Radiation Safety procedures.

REQUIREMENTS:

1. Prior Radiation Safety Officer approval of protocol A Request for Authorization to Procure and Use Radionuclides for Non-Human Use, RS2.1 form 1, and Training Summary, RS2.1 form 2, must be submitted to and approved by the Radiation Safety Officer. The application must include a written protocol and a summary of each individual’s experience.

2. Fume hood checkout

Environmental Health and Safety must perform an inspection of the hood that will be used in order to verify adequate flow. A label will be applied to the front side of the hood sash indicating that a check was performed.

3. Survey instrument

A survey instrument equipped with a NaI detector must be present during the procedure. This instrument must have a current calibration date.

4. Personnel monitoring

5. Dosimetry

Participating individuals must wear personnel dosimetry.

6. Bioassay

Baseline thyroid scan may be required for individuals performing an iodination. The Radiation Safety Office will determine this requirement on a case-by-case basis.

7. Air monitoring

In order to allow monitoring of the radioactive effluent during the iodination procedure, an air-sampler will be utilized. The Radiation Safety Office will provide the sampler.

8. Notification

Contact the Radiation Safety Office 24 hours in advance of each iodination. This will allow adequate time to set up air samplers and schedule bioassays (if required).

PROCEDURAL GUIDELINES:

1. The iodinator is responsible for starting and stopping the air sampling pumps and recording the start/stop times on a standardized form. Other information to be noted on this form includes the total activity used, the names of the Authorized User and involved individuals, the date of iodination.
(2) Set up a defined work area including waste repository and survey instrument station. All work surfaces must be covered with absorbent padding.

(3) Take standard lab precautions such as wearing eye protection, protective clothing and gloves (double gloves are recommended). **All nonparticipating lab personnel are not permitted in the lab during the procedure.**

(4) At the conclusion of the procedure, replace your gloves and take one smear of the outer-cartridge and the tube of the air-sampler and a second smear of the on-button of the air-sampler pump. These smears must be placed in a sealed container (i.e. plastic bag with seal) and labeled accordingly. The cartridge must then be placed in a sealed container.

(5) Consolidate all waste materials into approved yellow bags, place in the hood and contact the Radiation Safety Office for waste pick-up.

(6) Utilizing the survey instrument, perform monitoring of the experiment area and all personnel involved.

(7) Perform a contamination survey of the area and document the results on a standard lab survey form. For multiple user laboratories, post the hood with a sign indicating that the hood should not be used until it has been surveyed for contamination.

(8) If required, schedule a thyroid scan through the Radiation Safety Office.

**PROPER HANDLING OF WASTE:**

(1) When finished with the iodination, immediately reduce (from iodine to iodide) all fractions, liquid waste and residual iodine on equipment with sodium metabisulfite or thiosulfate.

(2) If there are items contaminated with iodine that cannot be reduced, store them in a fume hood inside a sealed bag containing activated charcoal. This is also the recommended method of storing unused I-125.