

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.