RADIONUCLIDE SAFETY DATA SHEET

NUCLIDE: Ga-67

FORMS: ALL SOLUBLE

PHYSICAL CHARACTERISTICS:

HALF-LIFE: 3.261 days

TYPE DECAY: e− capture

gamma:

- 0.091 MeV (2.9 %)
- 0.093 MeV (35.7 %)
- 0.185 MeV (19.7 %)
- 0.209 MeV (2.2 %)
- 0.300 MeV (16.0 %)
- 0.394 MeV (4.5 %)
- 0.888 MeV (0.1 %)

Hazard category: C-level (low hazard) : 100 uCi to 10 mCi
B-level (Moderate hazard) : > 10 mCi to 1 Ci
A-level (High hazard) : > 1 Ci

EXTERNAL RADIATION HAZARDS AND SHIELDING:

The exposure rate at 1 cm from 1 mCi is 803 mR/hr. The exposure rate varies directly with activity and inversely as the square of the distance. The tenth value of lead for this energy of radiation is 0.5 cm.

HAZARDS IF INTERNALLY DEPOSITED:

The annual limit on oral intake (ALI) of Ga67 corresponding to a whole-body guideline gamma exposure rate of 500 mrem/year is 800 uCi.

DOSIMETRY AND BIOASSAY REQUIREMENTS:

Film badges and dosimeter rings are required if 5 millicuries are handled at any one time or 1 millicurie levels are handled on a frequent (daily) basis.

Urine assays may be required after spills or contamination incidents.

SPECIAL PROBLEMS AND PRECAUTIONS:

1. When 5 millicuries are used, work behind lead shielding. Survey frequently. Handle stock solution vials in shields or use tongs or forceps. Change gloves often.
2. Segregate wastes with those with half-lives less than 4 days.
3. Dilute aqueous wastes may be disposed to the sewer system in amounts of up to 100 uCi daily per lab.

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