RADIONUCLIDE SAFETY DATA SHEET

NUCLIDE: Ga68 **FORMS: ALL SOLUBLE**

PHYSICAL CHARACTERISTICS:

HALF-LIFE: 68.3 Minutes

TYPE DECAY: e^+

gamma: 0.511 MeV (176 %)
0.8 MeV (0.4 %)
1.078 MeV (3.5 %)
1.24 MeV (0.14 %)
1.87 MeV (0.15 %)

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

EXTERNAL RADIATION HAZARDS AND SHIELDING:

The exposure rate at 1 cm from 1 mCi is 5375 mR/hr. The exposure rate varies directly with activity and inversely as the square of the distance. A 10 mCi generator should be shielded with 1.5 cm thickness of lead (minimum) in order to reduce the exposure to 5 mR/hr at 1' . 3 cm of lead will reduce the exposure to 0.5 mR/hr at 1' .

HAZARDS IF INTERNALLY DEPOSITED:

The annual limit on oral intake (ALI) of Ga68 corresponding to a whole-body guideline gamma exposure rate of 500 mrem/year is 1.62 mCi.

DOSIMETRY AND BIOASSAY REQUIREMENTS:

Film badges and dosimeter rings are required if 100 microcuries or more are handled.

Urine assays may be required after spills or contamination incidents.

SPECIAL PROBLEMS AND PRECAUTIONS:

1. Work behind lead shielding. Survey frequently. Handle stock solution vials in shields or use tongs or forceps. Change gloves often.

2. Segregate wastes to those with half-lives less than 4 days.

3. Dilute aqueous wastes may be disposed to the sewer system in amounts of up to 10 uCi daily per lab.