

RADIONUCLIDE SAFETY DATA SHEET

NUCLIDE: Be-7

FORMS: Soluble, Non-soluble

PHYSICAL CHARACTERISTICS:

HALF-LIFE: 53.3 days

TYPE DECAY: e⁻ capture

gamma: 0.477 MeV (10.4%)

Hazard category: C- level (low hazard) : 1 to 200 millicuries
B - level (Moderate hazard) : > 200 mCi to 10 Ci
A - level (High hazard) : > 10 Ci

EXTERNAL RADIATION HAZARDS AND SHIELDING:

The exposure rate at 1 cm from 1 mCi is 300 mR/hr. The exposure rate varies directly with activity and inversely with the square of the distance. The tenth value of lead for this radiation energy is 2 cm.

HAZARDS IF INTERNALLY DEPOSITED:

The annual limit on oral intake (ALI) of Be7 corresponding to a whole-body guideline exposure of 500 mrem/year is 2000 µCi.

DOSIMETRY AND BIOASSAY REQUIREMENTS:

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

SPECIAL PROBLEMS AND PRECAUTIONS:

1. When millicuries levels are used or stored, use lead shielding. Survey frequently. Handle stock solution vials in shields or use tongs or forceps.
2. Survey frequently with a gm/NaI monitor. Change gloves often.
3. Segregate wastes to those with half-lives ≥ 19 days to less than 65 days.
4. Dilute soluble aqueous wastes may be disposed to the sewer system in amounts of up to 1 mCi daily per lab.

8/02