

**$^{86}\text{Rb}$** 

Nuclide Safety Data Sheet  
 Rubidium- 6  
 www.nrc.gov

 **$^{86}\text{Rb}$** **I. PHYSICAL DATA**

Radiation<sup>a</sup>:                      beta : 69 keV (91%); 1774 keV (9.1%)  
    Gamma X-ray : 1077 keV (9.1%)  
 Gamma Constant<sup>b</sup>:            0.054 mrem/hr per mCi @ 1.0 meter [1.45 E-5 mSv/hr per MBq @ 1.0 meter]  
 Half-Life [T<sub>1/2</sub>]:                Physical T<sub>1/2</sub><sup>b</sup>: 1.7 da  
    Biological T<sub>1/2</sub><sup>c</sup>: GI: <1 da ; Total body : 45 da  
    Effective T<sub>1/2</sub>:    GI: 1 da ; Total body : 13 da  
 Specific Activity<sup>a</sup>:             .14 E4 Ci/g [3.01 E15 Bq/g] max.

**II. RADIOLOGICAL DATA**

Radiotoxicity<sup>d</sup>:                 6.6E-9 Sv/g (25 mrem/uCi) of  $^{86}\text{Rb}$  ingested [bone]; 2.53E-9 effective  
    3.3E-9 Sv/g (12 mrem/uCi) of  $^{86}\text{Rb}$  inhaled [lung]; 4.3E-9 Sv/g [bone]  
 Critical Organ:                 Bone (ingestion); Bone surface, Lung (inhalation)  
 Intake Route:                    Ingestion, inhalation, puncture, wound, skin contamination (absorption);  
 Radiological Hazard:         External Internal Exposure; Contamination

**III. SHIELDING**

Photon :	<u>Half Value Layer [HVL]</u>	<u>Tenth Value Layer [TVL]</u>
Lead [Pb] <sup>a</sup>	14 mm (0.02 inches)	41 mm (0.016 inches)

Net T

Portable

