

Nuclear Chemistry Problems

1. Boron-12 (atomic mass = 12.014352 amu) has a half-life of 0.0202 s. What is the activity of a 1.00 g sample of B-12 in Ci?
2. Chlorine-36 has an atomic mass of 35.9683070 amu. If a 2.50 g sample has an activity of Ci. What is the half-life of this isotope in years?
3. What mass of Scandium-46 (atomic mass = 45.955172 amu) is needed to have an activity of 0.453 Ci?