

# Radioactive Dating

$$A = A_0 e^{-\lambda t} \quad A_0 = 0.23Bq \quad (1 \text{ g})$$



## Biological Effects of Radiation

$$\text{Exposure(roentgens)} = \left( \frac{1}{2.58 \times 10^{-4}} \right) \frac{q}{m}$$

$$\text{AbsorbedDose} = \frac{\text{Energy}}{\text{Mass}}$$

Ionizing Radiation: 1 Gray = 1J/kg    1 rad = 0.01 Gy

$$\text{BiologicalEquivalentDose} = \text{AbsorbedDose} \times \text{RBE}$$

