

Experimental cross section of the $3\text{He}(\alpha,\gamma)7\text{Be}$ reaction around $E_{\text{cm}} = 3 \text{ MeV}$

Activation method

Thin windowed gas cell target

- Al catcher foil
- 100 mbar ^3He gas
- ~42 mm long gas cell

Cyclotron of Atomki

- $E_{\alpha} = 7 - 11 \text{ MeV}$
- Typical beam current: $0.5 \text{ p}\mu\text{A}$.
- Irradiation lengths: 12 - 24 hours

HPGe for activity determination

- 100% relative efficiency
- 10 cm lead shielding
- ~ 2 weeks of countings

