

${}^{24}\text{Mg}(\alpha, {}^8\text{He})$  1974Ro17

Type	Author	Citation	Literature Cutoff Date
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**1974Ro17:** The mass of  ${}^{20}\text{Mg}$  was measured by characterizing the  ${}^{24}\text{Mg}(\alpha, {}^8\text{He})$  reaction at  $E(\alpha)=156$  MeV. The  ${}^8\text{He}$  ejectiles were momentum analyzed using a low dispersion double focusing magnetic analyzer consisting of a dipole followed by a quadrupole doublet. At  $\theta_{\text{lab}}=2^\circ$   ${}^8\text{He}$  corresponding to  ${}^{20}\text{Mg}$  production were observed with  $\sigma \approx 7$  nb/sr. The mass excess deduced was 17.74 MeV 21, with most uncertainty attributed to target thickness and other systematic issues. An IMME comparison of the A=20 T=2 (isospin) multiplet is given. Measurements providing improved  ${}^8\text{He}$  mass values, such as (1974Ce05), had an impact on the  ${}^{20}\text{Mg}$  mass and improved the IMME comparison.

**1976Tr03:** The mass of  ${}^{20}\text{Mg}$  was measured at  $E(\alpha)=126.9$  MeV using an Enge spectrometer a  $\theta_{\text{lab}}=5^\circ$ . The  ${}^8\text{He}$  recoils were observed with  $\sigma \approx 3$  nb/sr. The mass excess 17.57 MeV 3 was deduced, and A=20 T=2 multiplet states are compared.

 ${}^{20}\text{Mg}$  LevelsE(level)

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