## $^{250}$Md α decay 2008An16,1985He22,1973Es01

| History | | | |
|---|---|---|---|
| Type | Author | Citation | Literature Cutoff Date |
| Full Evaluation | C. D. Nesaraja | NDS 198,449 (2024) | 31-Jul-2022 |

Parent: $^{250}$Md: E=0; $T_{1/2}$=51 s *6*; Q(α)=8155 *28*; %α decay=7.0 *8*

$^{250}$Md-$T_{1/2}$: From weighted average of 50 s *+10−7* (2008An16), 40 s *+37−13* (1985He22) and 52 s *6* (1973Es01). The current adopted $T_{1/2}$ in the ENSDF database is 52 s *6* (2001Ak11).

$^{250}$Md-Q(α): From 2021Wa16.

$^{250}$Md-%α decay: %ε=93.0 *8*, %α=7.0 8 (2008An16). Others: %ε= 94% *3*(1973Es01), %α= 13% *+10* (1985He22).

2008An16: $^{250}$Md was produced from the α decay of $^{254}$Lr. Measurement were performed at the UNILAC accelerator at GSI. Alphas were measured using the 16 strip silicon PIPS. The α energies were determined to an accuracy of 10 keV. The γ rays in prompt and delayed coincidence with α particles were measured with a Clover Ge detector. No level scheme is proposed by 2008An16 but the authors conclude that none of the two α groups at 7750 and 7840 keV decay directly to the g.s. of $^{246}$Es.

1985He22: $^{250}$Md was produced from the α decay of $^{254}$Lr. Measurement were performed at GSI. Position-sensitive surface barrier were used to measure the alphas. Deduced Eα, Iα, and $T_{1/2}$.

1973Es01: $^{250}$Md was produced by bombarding $^{243}$Am with $^{13}$C at the Berkeley heavy-ion accelerator. The α particles were measured with Si-Au surface barrier detectors. Measured Eα and Iα.

### $^{246}$Es Levels

| E(level) | $T_{1/2}$ | Comments |
|---|---|---|
| 0.0+x | 7.5 min *5* | $T_{1/2}$: From Adopted Levels. |

### α radiations

| Eα | E(level) | Iα† | Comments |
|---|---|---|---|
| 7750 *20* | | ≈80 | Eα: Weighted average of 7750 keV *20* (2008An16), 7751 keV *20* (1985He22), and 7750 keV *20* (1973Es01).<br>Iα: From 1985He22. Other:≈70 (1973Es01). |
| 7830 *20* | | ≈20 | Eα: Weighted average of 7840 keV *40* (2008An16), 7837 keV *20* (1985He22), and 7820 keV *30* (1973Es01).<br>Eα: In coincidence with unplaced 152.3γ.<br>Iα: From 1985He22. Other:≈30 (1973Es01). |

† For absolute intensity per 100 decays, multiply by 0.070 *8*.

### γ($^{246}$Es)

| $E_γ$ | $E_i$(level) | Comments |
|---|---|---|
| x152.3 *5* | | Eγ: Unplaced γ in coincidence with the 7840 *40* α group (2008An16). |

x γ ray not placed in level scheme.