

Examples of isotope equations involving alpha decay, beta decay, and gamma radiation

1. Alpha decay: ${}_{92}^{238}\text{U} \longrightarrow {}_{90}^{234}\text{Th} + {}_2^4\text{He}$
2. Beta decay: ${}_6^{14}\text{C} \longrightarrow {}_7^{14}\text{N} + \text{e}^- + \bar{\nu}_e$
3. Gamma radiation: ${}_{27}^{60}\text{Co} \longrightarrow {}_{28}^{60}\text{Ni} + \text{e}^- + \bar{\nu}_e + \gamma$
4. Alpha decay: ${}_{88}^{226}\text{Ra} \longrightarrow {}_{86}^{222}\text{Rn} + {}_2^4\text{He}$
5. Beta decay: ${}_{19}^{40}\text{K} \longrightarrow {}_{20}^{40}\text{Ca} + \text{e}^- + \bar{\nu}_e$
6. Gamma radiation: ${}_{43}^{99m}\text{Tc} \longrightarrow {}_{43}^{99}\text{Tc} + \gamma$
7. Alpha decay: ${}_{84}^{210}\text{Po} \longrightarrow {}_{82}^{206}\text{Pb} + {}_2^4\text{He}$
8. Beta decay: ${}_1^3\text{H} \longrightarrow {}_2^3\text{He} + \text{e}^- + \bar{\nu}_e$
9. Gamma radiation: ${}_{55}^{137m}\text{Cs} \longrightarrow {}_{55}^{137}\text{Cs} + \gamma$
10. Alpha decay: ${}_{92}^{235}\text{U} \longrightarrow {}_{90}^{231}\text{Th} + {}_2^4\text{He}$