



DoD Enriched Isotope Interests

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**For the Office of the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense
Programs/Nuclear Matters OASD(NCB/NM)**



NM Mission and Vision

Mission

- To provide a safe, secure, and effective nuclear deterrent and the means to counter nuclear threats.

Vision

- To support the President's vision of global stability and national security, by leading the transformation of the nuclear weapons enterprise and enhancing our ability to counter nuclear terrorism.





OASD(NCB/NM) Role in Isotopes

DoDD 5134. 08:

- The ASD(NCB) is the principal advisor to the Secretary and Deputy Secretary of Defense and the USD(AT&L) on nuclear energy, nuclear weapons, and chemical and biological defense, consistent with 10 USC 138b(10) and 10 USC 138d.
- Oversees and coordinates DoD activities regarding the detection of nuclear weapons and materials and serves as the acquisition and technology lead in accordance with NSPD 43/HSPD 14.
- **Serves as the principal DoD point of contact for cooperation with DOE and other agencies on all atomic energy matters.**
 - Serves as the DoD champion for He-3 distribution.
- Serves as the USD(AT&L) principal point of contact for nuclear defense activities in nonproliferation initiatives.



DoD Enriched Isotopes of Interest

- **Neutron detector R&D:** ^3He , ^6Li , ^7Li , ^{10}B , ^{35}Cl
- **Nuclear forensics surrogate debris:** short-lived fission products, neutron activation products with half-lives > 10 days, U and Pu isotopes, ^{240}Am , ^{241}Am , ^{240}Cm
- **Nuclear forensics mass spikes:** ^{233}U , ^{236}Np , ^{244}Pu , ^{243}Am , ^{246}Cm
- **Nuclear forensics alpha spectroscopy calibration:** ^{232}U , ^{233}U , ^{236}Pu , ^{242}Pu , ^{237}Np , ^{242}Am , ^{246}Cm
- **Health effects of chronic exposure to uranium R&D:** ^{238}U
- **Medical Isotopes:** $^{99}\text{Mo}/^{99}\text{Tc}$, ^{192}Ir , ^{137}Cs
- **NIST-traceable standards:** ^{232}U , ^{235}U , ^{238}U , ^{243}Am , ^{230}Th , ^{242}Pu , ^{14}C
- **Ring Laser Gyros:** ^3He , ^4He
- **Stockpile needs:** Defense Programs



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