

## Uranyl Nitrate Informational Memo

### NEWCOMER SUPPLY PRODUCTS CONTAINING URANYL NITRATE:

Uranyl Nitrate 1%, Aqueous	Part 14036
Steiner-Steiner Modified Silver Stain Kit (Soln A)	Part 9171

### APPLICATION:

Uranyl nitrate, also known as Uranyl Nitrate Hydrate, Uranyl Dinitrate Hydrate, Uranium Oxynitrate and Uranyl Dinitrate Hexahydrate, is used as a component of the Steiner-Steiner Modified Silver Stain procedure.

Uranyl Nitrate is manufactured using depleted uranium, a by-product of the production of fuel in nuclear reactors. This depleted uranium consists mainly of the <sup>238</sup>U isotope and has approximately 30% of the radioactivity of natural uranium. Typical laboratory quantities of <sup>238</sup>U, which contain an alpha radiation emitter with some beta and gamma emitting decay products, do not present a significant external radiation hazard. The alpha particles do not penetrate the storage container or the skin. The beta emissions do not have enough energy to penetrate the skin and the gamma radiation is minimal.

1. Avoid disposing Uranyl Nitrate solutions down the drain or sanitary sewer.
2. Collect Uranyl Nitrate waste solutions and solids in an appropriate and specifically labeled leak-proof container for proper disposal.

Uranyl Nitrate, although not a radiation hazard, it still considered a toxic health hazard and all personal protection precautions should be implemented when handling. Safety risks associated with Uranyl Nitrate are outlined in the SDS and should be evaluated by the user. Dispose of Uranyl Nitrate solutions and solids in a safe manner to comply with local, state and federal regulations.

### REFERENCES:

1. Dapson, Janet Crookham, and Richard Dapson. *Hazardous Materials in the Histopathology Laboratory: Regulations, Risks, Handling, and Disposal*. 4th ed. Battle Creek, MI: Anatech, 2005. 277.
2. <https://labsafety.gwu.edu/uranyl-acetate-uranyl-nitrate>
3. <http://nj.gov/health/eoh/rtkweb/documents/fs/1978.pdf>