



Radioactive Equipment **DISPOSAL**

EQUIPMENT WITH RADIOACTIVE MATERIAL REQUIRES EVALUATION BEFORE DISPOSAL

Contact the Division of Research Safety if you see the following equipment.

**Aircraft Gauges, Timepieces,
Switches, and Breakers**



Devices from the 1910s though the '60s used radioactive paint for glow-in-the-dark applications.

Compound: Radium

Alnor Dew Pointer



Quickly determines dew points of gases. Some contain a label indicating radioactive material.

Compound: Radium-226

**Ceramic Plates
Inside Electrical Switches**



These 600-pound switches have ceramic plates containing radioactive material.

Compound: Thorium

**Corning Uranium-Glass
Optical Filter**



An optical filter to transmit or absorb light in the ultraviolet, visible, and infrared spectrum.

Compound: Uranium

**Densitometers or Soil
Density Gauges**



A tool that measures the density and inner structure of the test material.

Compounds: Americium/
beryllium and cesium-137

Emergency Signs



Glow-in-the-dark devices, like exit signs, may contain radioactive material.

Compound: Tritium (H-3)

Gas Chromatographs



Chromatographs that use an electron capture device contain a sealed radioactive source.

Compounds: Iron-55 or nickel-63

Geiger Counters



Civil defense Cold War Geiger counters often included chips of uranium.

Compound: Uranium

Ionization Smoke Detectors



Some smoke detectors, especially older models, contain radioactive sources.

Compounds: Am-241 or nickel-63

Liquid Scintillation Counters



These devices contain a sealed radioactive source and often contain a warning label on the back.

Compounds: Barium-133 or cesium-137

Photographic Lenses



Some photographic lenses contain radioactive material to improve performance.

Compound: Thoria (ThO_2)

Radioactive Power Resistors



Uranium is not in the black glaze but distributed throughout the volume of the resistor material.

Compounds: Uranium

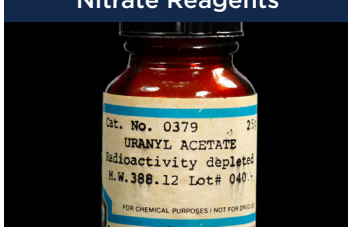
Static Elimination Devices



These devices eliminate the static charge that causes dust to adhere to surfaces.

Compound: Polonium-210

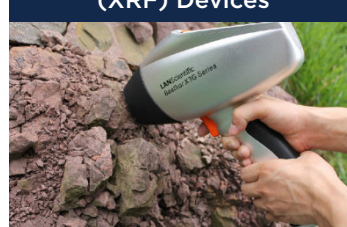
Uranyl Acetate and Nitrate Reagents



This material is commonly used as an electron microscopy stain.

Compound: Uranium

X-Ray Fluorescence (XRF) Devices



This tool uses a non-destructive technique to determine the composition of elemental materials.

Compound: Nickel-63

Electronic Tubes



Many types of electronic tubes contain radioactive material to ionize residual gas, improve timing characteristics, or help strike a discharge. The electronic tubes in the photo illustrate the tubes found in the table.

1. Signalite TG-167 spark gap	Cs-137	About 0.4 microcuries
2. Chatham 1B46 regulator	Ra-226	
3. Western Electric 724B TR cells	Ra-226	
4. Western Electric 423A regulators	Ra-226	External radium foil source on some versions, ~1.2 microcuries
5. KP-96 krytron	Ra-226	About 0.7 microcuries
6. Various small gas discharge tubes	Ra-226	External radium paint sources
7. 900V Corotron from Anton CDV-700	H-3(?)	
8. Western Electric 1B22 spark gap	Ra-226	2-4 microcuries
9. Western Electric 423B regulators	Ra-226	Internal radium as opposed to 423A; printed with radiation trefoil
10. Westinghouse 1B24 TR cell	Ra-226	Internal radium as opposed to 423A; printed with radiation trefoil
11. Westinghouse 1B26 TR cell	Ra-226	
12. Hytron OA2 regulators	Ra-226	
13. Bendix 8152 noise generator tunes	Ra-226	
14. Western Electric 6141 regulator	Kr-85	
15. Northern Electric 313C gas triode	Kr-85	Box indicates 4.0 microcuries
16. Phillips PL-S-series fluorescent lamp	Kr-85	Box indicates <5 microcuries
17. Raytheon CK 427 TR cell	Th-232	Tag indicates 300 microcuries of Th-232[!] but no activity detected
18. Eimac 35-TG power triode	Uranium	Uranium glass seals