

## Americium in Smoke Detectors

Some smoke detectors use small amounts of radioactive material to detect smoke.

- These devices use very small amounts of radioactive material and are safe to use in your home.
- Never tamper with an ionization smoke detector.
- Replace batteries every year.

### About Americium in Smoke Detectors

Smoke detectors are common household items. Ionization smoke detectors use a small amount of radioactive material, americium-241, to detect smoke. Alpha particles from the americium source ionize air molecules, allowing positive and negative ions to flow between charged plates in the smoke detector. The smoke alarm triggers when smoke particles disrupt the constant flow of ions.

If you use the smoke detector as directed and do not tamper with it, there is no radiation health risk.

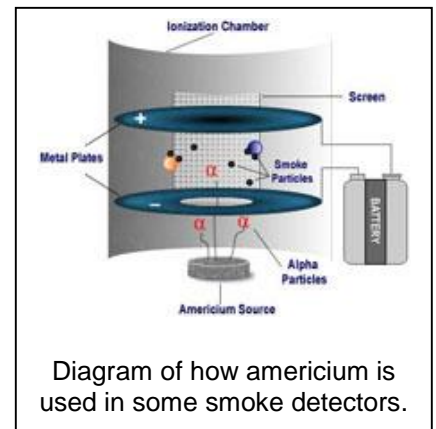


Diagram of how americium is used in some smoke detectors.

**Remember:** Smoke detectors are very safe and can save lives.

There is no health threat from ionization smoke detectors as long as the detector is not tampered with and it is used as directed. The tiny amount of americium used is encased in ceramic and foil. There are no special disposal instructions for ionization smoke detectors. They may be thrown away with household trash, however your community may have a separate recycling program.

## Rules and Guidance

### THE STATES

Each state has a program to protect people from radiation exposure. They control the use and disposal of radioactive material in consumer products.

### U.S. NUCLEAR REGULATORY COMMISSION (NRC)

Licenses are required for anyone who sells, uses or disposes of radioactive material. NRC sets rules for obtaining these licenses. Companies that make ionization smoke detectors must have a license. However, people who purchase the smoke detectors for their homes do not have to have a license.

### What you can do

- **Use a smoke detector** in your home. It can save your life.
- **Never tamper** with an ionization smoke detector or attempt to remove the americium.

- **Replace the batteries** in your smoke detector every year or as directed. Most detectors are certified for a useful life of ten years.
- **Throw away** outdated ionization smoke detectors. Your community may have a separate recycling program for them.

**Remember:** Never take an ionizing smoke detector apart.

## Where to learn more

You can learn more about americium in smoke detectors by visiting the resources available on the following webpage: <http://www3.epa.gov/radtown/americium-smoke-detectors.html#learn-more>.