



HTS Survey for Classification of Radioactive chemical elements and radioactive isotopes

We're reaching out from the U.S. Census Bureau's Microanalysis Branch to gather insights from industry experts like you. We're currently reviewing how isotopes are classified under the Harmonized Tariff Schedule (HTS). Our goal is to ensure that the classifications reflect current industry practices and improve clarity in reporting. Your input would be instrumental in this effort.

Background:

As part of our investigation, we've identified potential ambiguities in the classification Radioactive chemical elements and radioactive isotopes (including the fissile or fertile chemical elements and isotopes) and their compounds; mixtures and residues containing these products:

in the structure: under HTS 2844 Currently:

- **HTS 2844.43.00.10:** Elements, isotopes and compounds with cobalt-60 radioactivity only
 - Other elements, isotopes and compounds:
- **HTS 2844.43.00.21:** Americium-241, californium-252, cesium-137, gadolinium- 153, iridium-192, promethium-147, radium-226, selenium-75, or ytterbium-169
- **HTS 2844.43.00.50:** Other

However, this general classification does not distinguish from other related mineral substances, which may obscure data accuracy and limit analytical insight.

Proposed Change			
Heading/ Subheading	Stat Suffix	Article Description	Percent of Trade by Value
2844.43.00		Other radioactive elements and isotopes and compounds; other alloys, dispersions (including cermets), ceramic products and mixtures containing these elements, isotopes or compounds:	
2844.43.00	10	Elements, isotopes and compounds with cobalt-60 radioactivity only	
	xx	Elements, isotopes and compounds with actinium-225 (thorium-229 cow) radioactivity only	
	xx	Elements, isotopes and compounds with astatine-211 radioactivity only	
	xx	Elements, isotopes and compounds with barium-133 radioactivity only	
	xx	Elements, isotopes and compounds with lead-203 radioactivity only	

	xx	Elements, isotopes and compounds with lutetium-177 radioactivity only	
	xx	Elements, isotopes and compounds with nickel-63 radioactivity only	
	xx	Elements, isotopes and compounds with radium-224/lead-212 generators radioactivity only	
	xx	Elements, isotopes and compounds with tungsten-188 radioactivity only	
		Other elements, isotopes and compounds:	
	21	Americium-241, californium-252, cesium-137, gadolinium-153, iridium-192, promethium-147, radium-226, selenium-75, or ytterbium-169	
	50	Other	

Your Input Needed:

To better understand the implications of this proposed change, we would appreciate your feedback on the following:

- **What approximate percentage of your imports under this subheading would you estimate fall under the new code if implemented?**

Note: We're only seeking rough estimates at this time—no additional data or records are needed. For example, it's perfectly fine to respond with something like, "We estimate around 50%, but we're not certain."

Additional Context:

Actinium-225 (thorium-229 cow) Actinium-225 is collected as a radioactive decay product of thorium-229 (referred to as "milking the thorium cow"), which in turn, is a decay product of accumulated stockpiles of uranium-233, produced either in a reactor or an accelerator. Actinium-225 is being developed for targeted treatment of cancer.

Americium-241, produced in reactors, is an artificial radioisotope used in smoke detectors; measurement tools for steel, paper, and other industrial processes; detecting toxic lead in paint; and locating drilling sites for oil and gas wells.

Astatine-211, produced in accelerators, is an artificial radioisotope that shows promising applications in the treatment of cancer.

Barium-133, produced in reactors, is an artificial radioisotope used in gamma radiation detection equipment and research into nuclear physics and radiation.

Californium-252, produced in reactors, is an artificial radioisotope critical to the nuclear energy industry for initiating nuclear fission reactions. It is also used to scan for explosives and for defects in machinery. Additional uses include cancer therapy and the location of oil deposits.

Gadolinium-153, produced in reactors, is an artificial radioisotope used in the research and diagnosis of bone density disorders.

Lead-203 is an artificial radioisotope produced in accelerators. When used with lead-212, this radioisotope shows promising applications in medical imaging and treatment of cancer.

Lutetium-177, produced in reactors, is an artificial radioisotope used as the active ingredient in treatments approved by the U.S. Food and Drug Administration (FDA) for advanced prostate cancer and neuroendocrine tumors.

Nickel-63, produced in reactors, is an artificial radioisotope for devices that detect trace amounts of narcotics, other chemical products, and explosives; and specialized batteries for long-lived, low power devices, including sensors and space probes.

Promethium-147, produced in reactors, is an artificial radioisotope used in power-generating equipment for deep space missions and in measurement devices in the manufacturing of some ultra-thin materials.

Radium-224/lead-212 generators— Radium-224 is a decay product of thorium-228, produced in nuclear reactors. Radium-224 is the primary source for its radioactive decay product, lead-212,²³ which in turn has promising applications in medical imaging applications and the treatment of cancer when used with lead-203.
