



Designation: C 1414 – 9901

Standard Practice for The Separation of Americium from Plutonium by Ion Exchange¹

This standard is issued under the fixed designation C 1414; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This practice describes the use of an ion exchange technique to separate plutonium from solutions containing low concentrations of americium prior to measurement of the ²⁴¹Am by gamma counting.

1.2 This practice covers the removal of plutonium, but not all the other radioactive isotopes that may interfere in the determination of ²⁴¹Am.

1.3 This practice can be used when ²⁴¹Am is to be determined in samples in which the plutonium is in the form of metal, oxide, or other solid provided that the solid is appropriately sampled and dissolved (See Test Methods C 758, C 759, and C 1168).

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*

¹ This practice is under the jurisdiction of ASTM Committee C-26 on Nuclear Fuel Cycle and is the direct responsibility of Subcommittee C26.05 on Methods of Test. Current edition approved January 10, 1999; 2001. Published February 1999. Originally published as C 1414-99. Last previous edition C 1414-99.