

Table 7a
Total mass of ²³⁵U and Pu by NDA Gamma-ray (NDA)

Method	Instrument	Material	Uncertainty Component (% rel., k=1)		ITV (% rel., k=1)
			u(r)	u(s)	
HRGS + Computed Efficiency	ECGS - IMCG - MMCG / ISOCS	LEU MTR Fuel Assembly (U alloy); ²³⁵ U, ²³⁸ U			
		HEU MTR Fuel Assembly (U alloy); ²³⁵ U			
		HEU Targets (U metal); ²³⁵ U			
		MTR Fuel Plate/Rod (U alloy); ²³⁵U, ²³⁸U	6.0	3.0	6.7
		Uranium Fuel Rods (U oxide); ²³⁵ U, ²³⁸ U			
		MOX Fuel Rods; ²³⁵ U, ²³⁸ U, ²³⁹ Pu			
		U Oxide Powder; ²³⁵ U, ²³⁸ U			
		Pu Oxide Cans; ²³⁹ Pu			
	ECGS - IMCG - MMCG / ISOCS	LEU Hold-up (ventilation) (U Oxide); ²³⁵ U, ²³⁸ U			
		LEU Hold-up (Process) (U Oxide); ²³⁵ U, ²³⁸ U			
		HEU Hold-up (U oxide); ²³⁵ U, ²³⁸ U			
		LEU Filters (U Oxide); ²³⁵ U, ²³⁸ U			
		Scrap Powder (U Oxide/other); ²³⁵ U, ²³⁸ U			
		Waste (small items; U/Pu Oxide); ²³⁵ U, ²³⁸ U			
		Waste Drums; U-Pu Oxide, metal, other; ²³⁵ U, ²³⁸ U, ²³⁹ Pu			
		Scrap Drums; U-Pu Oxide, metal, other; ²³⁵ U, ²³⁸ U, ²³⁹ Pu			
		Waste Crates; U-Pu Oxide, metal, other; ²³⁵ U, ²³⁸ U, ²³⁹ Pu			
	ECGS - IMCG - MMCG / ISOCS	DU Bulk Containers (Oxides/Catalysts); ²³⁵ U, ²³⁸ U			

*click a hyperlink to open method's narrative

1. The ITV are available only for 1 row of the ITV table, namely MTR Fuel Plate/Rod (U alloy), measured using HRGS and employing ISOCS mathematical efficiency calibration method.
2. The ITV Table 7a will be updated with the top-down values, as and when they are available.
3. Generation of prospective values for the range materials specified in Table 7a is in progress. It will be based on a Monte Carlo bootstrapping approach.