

USP Reference Standards/ARMS to support various vaccine platforms

Vaccine type	Vaccine platform	Carrier protein	Identity	Molar mass and sizing standards			Formulation assessment	Impurities	
		CRM197 ¹ ↗	PS NMR SS ² ↗	Thyroglobulin ↗	BSA ↗	Pullulan	Squalene ↗	Octoxynol-9 ↗	gDNA ↗
Viral	Inactivated			X	X		X	X	X
	Attenuated virus			X	X				X
Nucleic acid	Viral vector			X	X			X	X
	mRNA		X						X
	DNA		X						
Isolated antigen presentation	Subunit	X	X	X	X	X		X	X
	VLP			X	X	X			

¹ CRM: Cross-Reacting Material 197

² PS NMR SS: Polysaccharide Nuclear Magnetic Resonance System Suitability

[↗](#) External link for additional information