Infant Head Phantoms – Comparison Guide

Feature	Solid homogeneous infant head	Hollow infant head with cavity
Geometry	Based on CT scan of a 44-week neonate	Same anatomical shape derived from CT scans like solid model
Structure	Solid homogeneous	2 mm outer shell, liquid-fillable interior
Internal Volume	None	Yes - fillable with optical liquid via inlet pipe
Flow Simulation (DCS Compatible)	Not supported	Yes - supports DCS and flow-based experiments
Optical Property Customization	Yes - fully customizable	Yes - customizable with standard off-the-shelf option (see below)
Off-the-Shelf Availability	Varies with time – contact us for info	Yes - μ_a = 0.19 cm-^{1}, μ_s' = 7.6 cm-^{1}
Modality Compatibility	fNIRS, DOT	fNIRS, DOT, DCS
Use Cases	Cap testing, probe alignment, imaging system validation	All for the solid model plus flow studies
Best For	Standard anatomical validation and training of fNIRS/DOT systems and devices	Advanced testing including hemodynamic simulation and DCS validation