

Materials List for:

Fabrication and Characterization of Optical Tissue Phantoms Containing Macrostructure

Madeleine S. Durkee¹, Landon D. Nash¹, Fatemeh Nooshabadi¹, Jeffrey D. Cirillo², Duncan J. Maitland¹, Kristen C. Maitland¹

¹Department of Biomedical Engineering, Texas A&M University

²Department of Molecular Pathogenesis and Immunology, Texas A&M College of Medicine

Correspondence to: Kristen C. Maitland at kmaitland@tamu.edu

URL: <https://www.jove.com/video/57031>

DOI: [doi:10.3791/57031](https://doi.org/10.3791/57031)

Materials

Name	Company	Catalog Number	Comments
Dow Corning Sylgard 184 Silicone Encapsulant Clear 0.5 kg Kit	Ellsworth Adhesives	184 SIL ELAST KIT 0.5KG	Polydimethylsiloxane: polymer base for optical phantoms
White Rutile Titanium Dioxide powder	Atlantic Equipment Engineers	TI-602	Scattering particles for optical phantoms
Higgins Fountain Pen India Ink	Michaels Craft Stores	10015483	Absorbing particles for optical phantom
Heat Resistant tape	Uline	S-7595	Heat resistant tape for polymer molds
Fortus 360mc 3D printer	Stratasys	N/A	Able to switch build and support material with this model printer
ABS Ivory Model Material	Stratasys	SDS-000001	Material for printing mold parts and/or using as support for printing internal structure
SR-30 Soluble Support	Stratasys	400638-0001	Base soluble support material for printing internal structure
Flacktek Speedmixer	Flacktek Inc.	DAC 150.1 FV	For efficient mixing of polymer and particles
Integrating sphere	Edmund Optics	58-585	For measuring optical properties
Polycarbonate build plates (1 mm)	Stratasys	N/A	Used polycarbonate build plates from Stratasys printer can also be used