

Materials List for:

Ovarian Cancer Detection Using Photoacoustic Flow Cytometry

Joel F. Lusk¹, Christopher Miranda¹, Barbara S. Smith¹

¹School of Biological and Health Systems Engineering, Arizona State University

Correspondence to: Barbara S. Smith at barbarasmith@asu.edu

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Materials

Name	Company	Catalog Number	Comments
0.025% Trypsin With EDTA	Corning	25-053-CI	
0.2 µm 1,000 mL Vacuum Filtration Unit	VWR	10040-440	For filtering larger volumes of DI water.
0.2 µm sterile syringe filter	VWR	28145-477	
3D Printed Tank		Custom-made	
Acquisition Card	National Instruments	PXIe-5170R	250 MS/s, 8-Channel, 14-bit
Alconox	Sigma-Aldrich	242985-1.8KG	Detergent used for cleaning glassware.
Amicon Ultra-15 Centrifugal Filters	Millipore	UFC903024	
Amicon Ultra-4 Centrifugal Filters	Millipore	UFC803024	
Bright-Line Hematocytometer	Hausser Scientific	1492	
Copper(II) Chloride	ACROS ORGANICS	206532500	
Coupling Objective	Thorlabs	LMH-10x-532	To couple pulsed light to optical fiber.
Coupling Stage	Newport	F-91-C1-T	Stage for coupling pulsed light to objective. Holds FP-1A and LMH-10x-532
CPX Series Digital Ultrasonic Cleaning Bath	Fisherbrand	Model CPX3800	
Data Acquisition software	National Instruments	NI LabVIEW 2017 (32-bit)	LabVIEW used to synchronize laser pulses with data acquisition.
Data Processing Software	Mathworks	Matlab R2016a	Reconstructions and graphs produced using Matlab software.
FBS	Sigma-Aldrich	F2442-500ML	
Fiber Chuck	Newport	FPH-DJ	Used to hold the bare fiber.
Fiber Coupler	Newport	FP-1A	3-Axis stage for positioning fiber chuck and optical fiber at the focus of the objective.
Folic Acid	Sigma-Aldrich	F7876-10G	
Formvar Coated TEM Grids	Electron Microscopy Sciences	FCF300-CU-SB	
Masterflex Tubing	Cole Parmer	EW-96420-14	
McCoy's 5A Medium	ATCC	30-2007	
Norm-Ject 10 mL Syringes	HENKE SASS WOLF	4100-X00V0	
Optical Fiber	Thorlabs	FG550LEC	Used to expose sample to pulsed light.
PBS	Alfa Aesar	J62036	
Penicillin Streptomycin	GIBCO	15140-122	

Pulsed Laser	RPMC Lasers Inc	Quantus-Q1D-1053	Pulsed laser source with specifications 1053 nm, 8 ns pulse, 10 Hz maximum.
Pulser/Receiver	Olympus	5077PR	Receives, filters, and amplifies photoacoustic signals. Operated with 59 dB Gain.
Quartz Capillary Tube	Sutter Instrument	QF150-75-10	
RPMI Midum 1640 (1x) Folic Acid Free	Gibco	27016-021	
Silicone	Momentive Performance Materials, Inc.	GE284	
SKOV-3 Cells	ATCC	HTB-77	
Sodium Bicarbonate	Sigma-Aldrich	S5761	
Sodium Carbonate	Sigma-Aldrich	S7795-500G	
Sodium Hydroxide Beads	BDH	BDH9292-500G	
Sodium Sulfide Nonahydrate	Sigma-Aldrich	431648-50G	
Syringe Pumps	New Era Pump Systems Inc	DUAL-1000	
Texas Red-X-Succinimyl ester	Invitrogen	1949071	
Transducer	Olympus	V214-BB-RM	Ultrasound detector with central frequency of 50 MHz and -6 dB fractional bandwidth of 82%.
Trypan Blue Solution 0.4%	Amresco	K940-100ML	
Tween 20	Sigma-Aldrich	P7949-100ML	
Ultrasound Gel	Parker Laboratories Inc.	Aquasonic 100	Ultrasound gel for transducer coupling