

Materials List for:

Tangential Flow Ultrafiltration: A “Green” Method for the Size Selection and Concentration of Colloidal Silver Nanoparticles

Catherine B. Anders¹, Joshua D. Baker¹, Adam C. Stahler¹, Austin J. Williams¹, Jackie N. Sisco², John C. Trefry², Dawn P. Wooley², Ioana E. Pavel Sizemore¹

¹Department of Chemistry, Wright State University

²Department of Neuroscience, Cell Biology, and Physiology, Wright State University

Correspondence to: Dawn P. Wooley at dawn.wooley@wright.edu, Ioana E. Pavel Sizemore at ioana.pavel@wright.edu

URL: <https://www.jove.com/video/4167>

DOI: [doi:10.3791/4167](https://doi.org/10.3791/4167)

Materials

Name	Company	Catalog Number	Comments
Silver nitrate (AgNO ₃)	Acros Organics Inc.	CAS: 7761-88-8	
Sodium borohydride (NaBH ₄)	Acros Organics Inc.	CAS: 16940-66-2	
Nitric acid (HNO ₃ , Optima)	Fisher Scientific Inc.	A467-1	Trace metal grade for ICP analysis
10,000 µg ml ⁻¹ silver standard, EnviroConcentrate	Ultra Scientific	US-IAA-047	
KrosFlo Research II/ Tangential Flow Filtration System	Spectrum Laboratories Inc.	SYR2-U20-01N	
0.05 µm PS (0.5 mm) 460 cm ²	Spectrum Laboratories Inc.	X30S-900-02N	
Midi 100 kD PS 200 cm ²	Spectrum Laboratories Inc.	X3-100S-901-02N	
Micro100 kD PS 20 cm ²	Spectrum Laboratories Inc.	X1AB-300-10N	
MasterFlex C-Flex tubing L/S Size 17	Cole-Palmer Instrument Co.	06424-17	
MasterFlex C-Flex tubing L/S Size 14	Cole-Palmer Instrument Co.	06424-14	
Cary 50 UV-VIS-NIR spectrophotometer	Varian Inc.		
LabRam HR 800 system	Horiba Jobin Yvon Inc.		
Varian 710ES ICP—S	Varian Inc.		

Table 1. Specific reagents and equipment.