

Materials List for

# Real-Time Evaluation of Absolute, Cytosolic, Free Ca<sup>2+</sup> and Corresponding Contractility in Isolated, Pressurized Lymph Vessels

Soumiya Pal<sup>1</sup>, Ashim K. Bagchi<sup>1</sup>, Amanda J. Stolarz<sup>1</sup>

<sup>1</sup>Department of Pharmaceutical Sciences, College of Pharmacy, University of Arkansas for Medical Sciences

## Corresponding Author

Amanda J. Stolarz  
astolarz@uams.edu

## Citation

Pal, S., Bagchi, A.K., Stolarz, A.J. Real-Time Evaluation of Absolute, Cytosolic, Free Ca<sup>2+</sup> and Corresponding Contractility in Isolated, Pressurized Lymph Vessels. *J. Vis. Exp.* (205), e66535, doi:10.3791/66535 (2024).

## Date Published

March 22, 2024

## DOI

10.3791/66535

## URL

jove.com/video/66535

## Materials

Name	Company	Catalog Number	Comments
20x S Fluor objective	Olympus Corporation of the Americas (Center Valley, PA, United States)	UPlanSApo	
Borosilicate glass micropipettes	Living Systems Instrumentation (Burlington, VT, United States)	GCP-75-100	
Calcium chloride (CaCl <sub>2</sub> )	Fisher Bioreagents (Waltham, MA, United States)	BP510-500	
Carbon dioxide (CO <sub>2</sub> )	nexAir (Memphis, TN, United States)	UN3156	
Dissection forceps	Fine Science Tools (Foster City, CA, United States)	11254-20	
EDTA (C <sub>10</sub> H <sub>16</sub> N <sub>2</sub> O <sub>8</sub> )	Fisher Bioreagents (Waltham, MA, United States)	BP118-500	
EGTA (C <sub>14</sub> H <sub>24</sub> N <sub>2</sub> O <sub>10</sub> )	Fisher Bioreagents (Waltham, MA, United States)	O2783-100	
Fura-2AM	Invitrogen (Waltham, MA, United States)	F1221	
Glucose (C <sub>6</sub> H <sub>12</sub> O <sub>6</sub> )	Fisher Bioreagents (Waltham, MA, United States)	D16-500	
Gravity-Fed Pressure regulator	custom-made in the lab		
Heating unit	Living Systems Instrumentation (Burlington, VT, United States)	TC-09S	
Imaging software	IonOptix (Westwood, MA, United States)		
Inverted fluorescent microscope	Olympus Corporation of the Americas (Center Valley, PA, United States)	IX73	
Ionomycin	Invitrogen (Waltham, MA, United States)	I24222	
IonOptix Cell Framing Adaptor	IonOptix (Westwood, MA, United States)	665 DXR	

Isoflurane	Piramal Critical Care (Telangana, India)	NDC 66794-017-10	
Isolated vessel perfusion chamber	Living Systems Instrumentation (Burlington, VT, United States)	CH-1	
Knot preparation forceps	Fine Science Tools (Foster City, CA, United States)	11253-20	
LED light source	Olympus Corporation of the Americas (Center Valley, PA, United States)	TL4	
Magnesium sulfate (MgSO <sub>4</sub> )	Acros Organics (New Jersey, NJ, United States)	213115000	
MyoCam-S3 Fast CMOS video system	IonOptix (Westwood, MA, United States)	MCS300	
Nifedipine	Sigma (St. Louis, MO, United States)	N7634	
Ophthalmic sutures			
Oxygen (O <sub>2</sub> )	nexAir (Memphis, TN, United States)	UN1072	
Pluronic acid	Sigma (St. Louis, MO, United States)	P2443	
Potassium chloride (KCl)	Fisher Bioreagents (Waltham, MA, United States)	BP366-500	
Pressure monitor system	Living Systems Instrumentation (Burlington, VT, United States)	PM-4	
Pressure Transducer	Living Systems Instrumentation (Burlington, VT, United States)	PT-F	
Silicone-lined petri-dish	custom-made in the lab		
Sodium bicarbonate (NaHCO <sub>3</sub> )	Fisher Bioreagents (Waltham, MA, United States)	BP328-500	
Sodium chloride (NaCl)	Fisher Bioreagents (Waltham, MA, United States)	BP358-212	
Sodium phosphate (NaH <sub>2</sub> PO <sub>4</sub> )	Fisher Bioreagents (Waltham, MA, United States)	BP329-500	
Sprague-Dawley rats	Envigo RMS (Indianapolis, IN, USA)	Male	9-13 weeks old
Stereomicroscope	Leica Microsystems (Wetzlar, Germany)	S9D	
Vannas spring scissors	Fine Science Tools (Foster City, CA, United States)	15000-03	