

Materials List for:

# Microperfusion Technique to Investigate Regulation of Microvessel Permeability in Rat Mesentery

Fitz-Roy E. Curry<sup>1</sup>, Joyce F. Clark<sup>1</sup>, Roger H. Adamson<sup>1</sup>

<sup>1</sup>Department of Physiology & Membrane Biology, University of California Davis

Correspondence to: Roger H. Adamson at [rhadamson@ucdavis.edu](mailto:rhadamson@ucdavis.edu)

URL: <https://www.jove.com/video/53210>

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## Materials

Name	Company	Catalog Number	Comments
MICROSCOPE, TABLE AND STAGE			
inverted microscope (metallurgical type) with trinocular head for video: example	Olympus	CK-40	try to place eyepieces higher relative to stage--you have to look through eyepieces while reaching around to top of stage over intervening micromanipulators
inverted microscope (metallurgical type) with trinocular head for video: example	Leica	DMIL	try to place eyepieces higher relative to stage--you have to look through eyepieces while reaching around to top of stage over intervening micromanipulators
narrow diameter, long working distance objective: example	Nikon	Nikon E Plan 10×/0.25 LWD	
stage platform--1/2 inch or 1 cm sheet steel	welding shop		this should be heavy to reduce vibration
Unislid x-y table: dove tail slides	Velmex	AXY4006W1	
VIDEO			
CCD video camera: example	Pulnix	TM-7CN (no longer available)	no color needed
video capture system with audio--generic			
video playback system (completely still frame, single frame motion)			
small microphone			
MICROMANIPULATORS, HOLDERS			
micromanipulator, XYZ (3)	Prior/Stoelting (no longer available)		look for fine Z, and larger range of travel in coarse drives for ease of positioning
hydraulic probe drive, one way	FHC	50-12-1C	need to buy either manual drive or electronic drive
manual drum drive	FHC	50-12-9-02	
or hydraulic drive, 3 way	Siskiyou Corporation	MX610 (1-way) or MX630 (3-way)	great for short arms, water filled and must be sent back for refill ~every 2 years
connectors/rods/holders	Siskiyou Corporation	MXC-2.5, MXB etc.	
pin vise	Starrett	162C	to hold restrainer
pipette holder	World Precision Instruments	MPH3	
water manometer ~120 cm			
MICROSCOPE TRAY			

clear Plexiglas for microscope tray for animal			
3/4 inch polished quartz disc ~1/4 inch tall	Quartz Scientific Inc.	custom	(or polished plexiglass, glass); make sure the height is less than working distance of objective
Plexiglas glue (Weld-on 4: CAUTION CARCINOGEN)			
medical adhesive for tissue well	NuSil	MED-1037	
All-purpose silicone rubber heat mat, 5" L x 2" W	Cole Parmer	EW-03125-20	heater for microscope tray--needs cord and controller--240V version available
Power Cord Adapter for Kapton Heaters and Kits, 6 ft, 120 VAC	Cole Parmer	EW-03122-75	
STACO 3PN1010B Variable-Voltage Controller, 10 A; 120 V In, 0-140 V Out	Cole Parmer	EW-01575-00	
PIPET MANUFACTURE			
vertical pipette puller	Sutter Instrument Company	P-30 with nichrome filament	
1.5 mm OD thin wall capillary tubing	Sutter Instrument Company	B150-110-10	
pipette grinder air stone and dissection microscope--see reference in text			or purchase a package from Sutter Instruments or World Precision Instruments
RX Honing Machine, System II	RX Honing Machine Corporation	MAC-10700 Rx System II Machine	alternative for air stone, use with a dissecting microscope mounted at an angle
with ceramic sharpening disc	RX Honing Machine Corporation		use "as is" or attach lapping film
lapping film sheets, 0.3 or 0.5 um	3M	part no. 051144 80827	268X Imperial lapping film sheets with adhesive back--can be purchased from Amazon