

Materials List for:

# Juxtacellular Monitoring and Localization of Single Neurons within Sub-cortical Brain Structures of Alert, Head-restrained Rats

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## Materials

Name	Company	Catalog Number	Comments
Ketaset (Ketamine HCl)	Fort Dodge	N/A	
Anased (Xylazine solution)	Lloyd Laboratories	N/A	
Betadyne (Povidone-Iodine)	CVS Pharmacy	269281	
Loctite 495	Grainger Industrial Supply	4KL86	20 - 40 cp cyanoacrylate
Vetbond	3M	1469SB	
Grip cement powder	Dentsply Intl	675571	For the base of the recording chamber
Grip cement liquid	Dentsply Intl	675572	For the base of the recording chamber
Silicone gel	Dow Corning	3-4680	
Jet denture repair acrylic powder	Lang Dental Manufacturing Co.	N/A	For securing the head restraint apparatus to the cranium
Ortho-Jet Fast curing orthodontic acrylic resin liquid	Lang Dental Manufacturing Co.	N/A	For securing the head restraint apparatus to the cranium
Chicago sky blue	Sigma	C8679	
Paraformaldehyde	Sigma	158127	For perfusion and tissue fixation
Phosphate-buffered saline	Sigma	P3813	For perfusion and tissue fixation
Cytochrome C	Sigma	C2506	For cytochrome-oxidase staining, <b>Figure 7</b>
Diaminobenzidine	Sigma	D5905	For cytochrome-oxidase staining, <b>Figure 7</b>
Rat sock	Sew Elegant (San Diego, CA)	N/A	Custom made, <b>Figures 1, 4</b>
PVC tube 2 ½"	U.S. Plastic Co.	34108	<b>Figure 4</b>
Subminiature D pins & sockets	TE Connectivity	205089-1	<b>Figure 3</b>
Stainless steel music wire 0.010" diameter	Precision Brand Products, Inc.	21010	<b>Figure 3</b>
Stereotaxic holding frame	Kopf Instruments	Model 900	<b>Figure 3</b>
Stereotaxic ear bars	Kopf Instruments	Model 957	<b>Figure 3</b>
Stereotaxic manipulator	Kopf Instruments	Model 960	<b>Figure 3</b>
½ mm drill burr	Henry Schein	100-3995	
Quiet-Air dental drill	Midwest Dental	393-1600	
Stainless steel 0-80 ⅛" screw	Fastener superstore	247438	<b>Figure 3</b>
0.2 ml centrifuge tube	Fisher Scientific	05-407-8A	<b>Figure 3</b>
Custom head-holding bar	UCSD SIO Machine Shop	N/A	Custom made, <b>Figures 2 - 4</b>
Custom head-holding plate	UCSD SIO Machine Shop	N/A	Custom made, <b>Figures 2 - 4</b>

Right angle post-clamp	Newport	MCA-1	<b>Figures 3, 4</b> ; standard opto-mechanical parts for the experimental jig ( <b>Figure 4</b> ) are also from Newport Corp.
8-32 3/4" screw	Fastener Superstore	240181	For head-restraint, <b>Figure 3</b>
4-40 1/4" screw	Fastener Superstore	239958	For head restraint, <b>Figures 3, 4</b>
Quartz capillary tubing	Sutter Instruments	QF-100-60-10	<b>Figure 5</b>
Carbon dioxide laser puller	Sutter instruments	P-2000	
Motorized micromanipulator	Sutter Instruments	MP-285	
Microelectrode amplifier	Molecular Devices	Multiclamp 700B	Alternate part: Molecular Devices Axoclamp 900A
Microelectrode amplifier head stage	Molecular Devices	CV-7B	Alternate part: HS-9Ax10 with Molecular Devices Axoclamp 900A
Isolated pulse stimulator	A-M Systems	Model 2100	Alternate part: HS-9Ax10 with Molecular Devices Axoclamp 900A
Audio monitor	Radio Shack	32-2040	
Pipette holder	Warner Instruments	#MEW-F10T	Alternate parts: see <b>Discussion, Figure 6A</b>
Electrode lead wire	Cooner wire	NEF34-1646	(optional), <b>Figure 6D</b>
Relay for amplifier head-stage	COTO Technology	#2342-05-000	(optional) Used with a custom-made printed circuit board (UCSD Physics Electronics Shop), <b>Figure 6A-C</b>
Digital video camera	Basler	A602fm	(optional) For behavioral monitoring, <b>Figure 7</b>
Puralube vet ointment	Amazon.com, Inc	NC0138063	