

Materials List for:

Multi-unit Recording Methods to Characterize Neural Activity in the Locust (*Schistocerca Americana*) Olfactory Circuits

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Materials

Name	Company	Catalog Number	Comments
Electrophysiology Equipment			
A.C. amplifier	GRASS	Model P55	for single sensillum recordings
Audio monitor (model 3300)	A-M Systems	940000	
Custom-made 16 channel pre-amplifier and amplifier	Cal. Tech. Biology Electronics Shop		for AL and MB recordings
Data acquisition unit	National Instruments	BNC-2090	
Fiber optic light	WPI	SI-72-8	
Light source 115 V	WPI	NOVA	
Manual micromanipulator	WPI	M3301R	for locust brain recordings
Stereomicroscope1 on boom stand	Leica	M80	for locust brain recordings
Stereomicroscope2	Leica	M205C	for single sensillum recordings
Vibration-isolation table	TMC	63-500 series	
Motorized micromanipulator	Sutter Instruments	MP285/T	
Oscilloscope	Tektronix	TD2014B	
Electrodes/Construction Tools			
16-channel electrode	NeuroNexus	A2x2-tet-3mm-150-121	for antennal lobe recordings
Borosilicate capillary tubes with filament, ID 0.69 mm	Sutter Instruments	BF120-69-10	for making glass electrodes
Micropipette puller	Sutter Instruments	P-1000	
Function generator	Multimeter Warehouse	SG1639A	for gold-plating electrodes
Gold plating solution (non cyanide)	SIFCO Industries	NC SPS 5355	
Impedance tester	BAK Electronics Inc.	IMP-2	for gold-plating electrodes
Switch rotary	Electroswitch	C7D0123N	for gold-plating electrodes
Pulse isolator	WPI	A365	for gold-plating electrodes
Q series electrode holder	Warner Instruments	64-1091	
Silver wire 0.010" diameter	A-M Systems	782500	ground electrode
8 pin DIP IC socket	Digikey	ED90032-ND	
Borosilicate capillary tubes with filament, ID 0.58 mm	Warner Instruments	64-0787	
Heat gun	Weller	6966C	
Rediohm-800 wire	Kanthal Precision Technologies	PF002005	
Titer plate shaker	Thermo Scientific	4625Q	twisting wires
Carbide scissors, 4.5"	Biomedical Research Instr	25-1000	for cutting twisted tetrode wires
Fine point tweezers	HECO	91-EF5-SA	for teasing tetrode wires apart
Odor Delivery			

6 ml syringe	Kendall	1180600777	for custom designed activated carbon filter
Brown odor bottles	Fisher	08-912-165	
Charcoal	BuyActivatedCharcoal.com	GAC-48C	
Desiccant	Drierite	23005	
Drierite gas drying jar	Fischer Scientific	09-204	
Heat shrink tubing	3M	EPS-200	odor filter preparation
Hypodermic needle aluminum hub, gauge 19	Kendall	8881-200136	for providing inlet and outlet lines for odor bottles
Mineral oil	Mallinckrodt Chemicals	6357-04	for odor dilution
Nalgene plastic tubing, 890 FEP	Thermo Scientific	8050-0310	for carrier gas delivery
Pneumatic picopump	WPI	sys-pv820	for odor delivery
Polyethylene tubing ID 0.86 mm	Intramedic	427421	for odor bottle outlet connections and saline profusion tubing
Stoppers	Lab Pure	97041	for sealing odor bottles
Time tape	PDC	T-534-RP	
Tubing luer	Cole-Parmer	30600-66	
Vacuum tube	McMaster-Carr	5488K66	
Preparation/Dissection			
100 x 15 mm petri dish	VWR International	89000-304	
18 AWG copper stranded wire	Lapp Kabel	4510013	
22 AWG stranded hookup wire	AlphaWire	1551	brain platform
Batik wax	Jacquard	7946000	
Dental periphery Wax	Henry-Schein Dental	6652151	
Electrowaxer	Almore International	66000	
Epoxy, 5 min	Permatex	84101	
Hypodermic needle aluminum hub	Kendall	8881-200136	
Protease from <i>Streptomyces griseus</i>	Sigma-Aldrich	P5147	for desheathing locust brain
Suture thread non-sterile	Fisher	NC9087024	for tying the abdomen after gut removal
Vetbond	3M	1469SB	for sealing amputation sites
Dumont #1 forceps (coarse)	WPI	500335	
Dumont #5 titanium forceps (fine)	WPI	14096	
Dumont #5SF forceps (super-fine)	WPI	500085	desheathing locust brain
10 cm dissecting scissors	WPI	14393	for removing legs and wings
Vannas scissors (fine)	WPI	500086	for removing cuticle, cutting the foregut
Saline Profusion			
Extension set with rate flow regulator	Moore Medical	69136	for regulating saline flow
IV administration set with Y injection site	Moore Medical	73190	for regulating saline flow