

Materials List for:

The Use of Trace Eyeblink Classical Conditioning to Assess Hippocampal Dysfunction in a Rat Model of Fetal Alcohol Spectrum Disorders

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Materials

Name	Company	Catalog Number	Comments
Neonatal Alcohol Exposure			
190 Proof Ethyl Alcohol (USP)	Pharmco-AAPER	225-36000 [ECU Medical Storeroom]	Can be substituted; should be USP; avoid using 200 proof ethyl alcohol
Container/Basket for Pups	Any		
Corn Oil	Any		Food grade
Heated Water Therapy Pump w/ Pads	Gaymar	TP-500	To keep pups warm; can be substituted
Hypodermic Needles 22G x 1 in, Sterile	Any		
Hypodermic Needles 30G x 1/2 in, Sterile	Any		
Isopropyl Alcohol 70%	EMD Millipore	PX1840-4 [Fisher Scientific]	Can be substituted; reagent grade www.fishersci.com
Long-Evans Rats (Female and Male Breeders)	Charles River Laboratories	N/A [ECU Dept. of Comparative Medicine]	Age and weight need to be specified; pricing varies by these factors www.criver.com
Micro Dissecting Scissors, 3.5 in, 23 mm Blades	Biomedical Research Instruments	11-2200	For cutting PE tubing brisurgical.com
Polyethylene 10 Tubing (0.011 in. I.D.; 0.024 in. O.D.)	BD Diagnostic Systems	22-204008 [Fisher Scientific]	Can be substituted www.fishersci.com
Polyethylene 50 Tubing (0.023 in. I.D.; 0.038 in. O.D.)	BD Diagnostic Systems	22270835 [Fisher Scientific]	Can be substituted www.fishersci.com
Regulated water heater or baby milk bottle warmer	Any		Optional; helps with warming up cold milk solutions
Tuberculin Syringes, Sterile, 1.0 ml	Any		
Tuberculin Syringes, Sterile, 10 ml	Any		Can be used to draw out ethyl alcohol or use appropriate size micropipet
Weigh Scale	Any		Should have good resolution (in gram units)
Name			
Company			
Catalog Number			
Comments			
EMG Headstage Fabrication and Bipolar Electrode Modification			
Bipolar Electrode, 2 Channel SS Twisted	Plastics One, Inc.	MS303/2-B/SPC ELECT SS 2C TW .008"	Must specify custom length of 20 mm below pedestal www.plastics1.com

Centi-Loc Strip Socket Insulator (aka, Micro Strip)	ITT Cannon / ITT Interconnect Solutions	CTA4-IS-60* or CTA4-1S-60*	*Depends on vendor; see www.onlinecomponents.com or www.avnetexpress.avnet.com
Dental Pliers, Serrated	CMF Medicon	390.20.05	Can be substituted; use to crimp wires to male contact pins www.medicon.de
Micro Dissecting Scissors, 3.5 in, 23 mm Blades	Biomedical Research Instruments	11-2200	Only use to cut 3T wires; cutting 10T wires will damage the blade - use the blade of the wire stripper instead brisurgical.com
PTFE-Coated Stainless Steel Wire, 10T (Bare Diameter .010 in)	Sigmund Cohn-Medwire	316SS10T	www.sigmundcohn.com
PTFE-Coated Stainless Steel Wire, 3T (Bare Diameter 0.003 in)	Sigmund Cohn-Medwire	316SS3T	www.sigmundcohn.com
Razor Blade	Any		To strip 1 mm from prongs of bipolar electrode
Relia-Tac Socket Contact Pin, Male	Cooper Interconnect	220-P02-100	See Allied Electronics Cat # 70144761 www.alliedelec.com
Tweezers, High Precision, Serrated, 4 3/4 in	Electron Microscopy Sciences	78314-00D	To grasp 10T wire firmly while stripping PTFE with smooth tweezers www.emsdiasum.com
Tweezers, High Precision, Smooth, 4 3/4 in	Electron Microscopy Sciences	78313-00B	www.emsdiasum.com
Tweezers, Ultra Fine Tips, 4 3/4 in	Electron Microscopy Sciences	78510-0	To strip 1 mm of PTFE from one end of 3T wire; grasp shielded portion with smooth tweezers www.emsdiasum.com
Wire Stripper, 16-26 AWG	Any		Use the blade end to cut micro strips
Name	Company	Catalog Number	Comments
Eyelid Surgery			
Surgical Instruments (High Quality Stainless Steel)			
2 x Dressing Forceps, 4 in Serrated	Biomedical Research Instruments	30-1205	Can be substituted; extra forceps for grasping electrodes/screws outside of surgery tray brisurgical.com
Dressing Forceps, 3 in Serrated	Biomedical Research Instruments	30-1200	Can be substituted brisurgical.com
Instrument Tray	Biomedical Research Instruments	24-1355	Can be substituted brisurgical.com
Knife Handle No. 3, 5 in	Biomedical Research Instruments	26-1000	Can be substituted brisurgical.com
Micro Dissecting Forceps, 3.5 in, Fine Points	Biomedical Research Instruments	10-1630	Can be substituted brisurgical.com
Micro Dissecting Forceps, 3.5 in, Smooth Platform (0.3 x 5 mm)	Biomedical Research Instruments	10-1720	brisurgical.com
Micro Dissecting Scissors, 3.5 in, Extremely Delicate, 15 mm Blades	Biomedical Research Instruments	11-2000	Can be substituted brisurgical.com
Plain Splinter Forceps, 3.5 in	Biomedical Research Instruments	30-1600	Can be substituted brisurgical.com
#10 Stainless Steel Surgical Blade for #3 Handle, Sterile	Any		Can be substituted

0-80 x 0.125 in Stainless Steel Screws	Plastics One, Inc.	0-80 x 0.125	Can be substituted www.plastics1.com
Alcohol Prep Pads, Sterile	Fisher Scientific	22-363-750 [Fisher Scientific]	Can be substituted www.fishersci.com
Betadine Povidone-Iodine	Purdue Frederick Co.	6761815101 [Fisher Scientific]	Can be substituted www.fishersci.com
Betadine Povidone-Iodine Prep Pads	Moore Medical	19-898-946 [Fisher Scientific]	Can be substituted www.fishersci.com
Cotton-Tipped Swabs, Autoclavable	Any		Typically 7.6 cm or 15.2 cm length
Drill Bit for Pin Vise, #55 (0.052 in)	Any		Metal should resist rusting and corrosion
Gauze Pads, 2 in x 2 in	Fisher Scientific	22-362-178 [Fisher Scientific]	Can be substituted www.fishersci.com
General Purpose Latex/Nitrile/Vinyl Gloves	Any		
Glass Bead Sterilizer	Any		Sterilize instruments between surgeries
Heated Water Therapy Pump w/ Pads x 2	Gaymar	TP-500	Can be substituted; separate pumps are recommended - 1 for surgery, 1 for recovery
Hypodermic Needles 26G x 3/8 in, Sterile	Any		
Isoflurane	Vedco	NDC 50989-150-12	Manufacturer can be substituted; veterinary approval may be required
Isoflurane Vaporizer System, Tabletop, Non-Rebreathing	Parkland Scientific	V3000PK	Can be substituted www.parklandscientific.com
Jewelers Screwdriver w/ 1.8-2 mm Blade	Any		Metal should resist rusting and corrosion
Ortho-Jet BCA Package (Dental Cement)	Lang Dental	B1334	Contains powder (1 lb) and liquid www.langdental.com
Oxygen Tank with Pressure Regulator, Large			Local supplier
Porcelain Crucible, High-Form, Glazed, 10 ml	CoorsTek, Inc.	07-965C [Fisher Scientific]	Can be substituted with Fisher FB-965-I Wide-Form Crucible www.fishersci.com
Puralube Veterinary Ophthalmic Ointment, Sterile	Henry Schein Company	NC0144682 [Fisher Scientific]	Can be substituted www.fishersci.com
Quatricide PV-15	Pharmagal	PV-15	Antimicrobial disinfectant; can be substituted www.pharmagal.com
Rat Gas Anesthesia Masks for Stereotaxic Surgery	Stoelting Company	51610	www.stoeltingco.com
Rat Stereotaxic Apparatus w/ Ear Bars (45 Degree)	Any		45 degree bars are recommended to prevent damaging eardrums
Roboz Surgical Instrument Milk	Roboz Surgical	NC9358575 [Fisher Scientific]	Can be substituted; for lubricating instruments during autoclaving www.fishersci.com
Rodent Hair Trimmer	Any		
Sodium Chloride	Fisher Scientific	S641-500 [Fisher Scientific]	To make 0.9% saline; reagent grade; USP www.fishersci.com
Stainless Steel Microspatula (Blade: 0.75 L x 0.18 in. W)	Fisher Scientific	21-401-15 [Fisher Scientific]	Can be substituted www.fishersci.com

Starrett Pin Vise, 0.000 in - 0.055 in	Any		Nickel-plated or equivalent recommended to resist rusting and corrosion
Sterile Surgical Gloves	Any		
Sterilization Wraps, 20 in x 20 in, Autoclavable	Propper Manufacturing	11-890-8C [Fisher Scientific]	Useful for wrapping autoclavable supplies and on sterile field during surgery www.fishersci.com
Surgical Drape, Sterile/ Autoclavable	Any		May need to cut to size for rats
Surgical Gown*	Any		*If required by IACUC
Surgical Mask	Any		
Tuberculin Syringes, Sterile, 1.0 ml	Any		
Weigh Scale	Any		Should have good resolution (in gram units)
Name	Company	Catalog Number	Comments
Eyeblink System and Components (assuming 4-rodent system)			
5 Channel Commutator x 4	Plastics One, Inc.	SL2 + 3C	www.plastics1.com
Bipolar Electrode Cable, Dual 305 x 4	Plastics One, Inc.	305-305 80CM TT2 (C)	Provides plug end to bipolar electrode on rat and to commutator; must be modified www.plastics1.com
Cable, 5 Channel, Shielded, 26 AWG x 4	Any		To fabricate commutator cable; this must be made from scratch
Chamber for Operant Test Box (Inside: 24 H x 23 W x 14 D in) x 4	Med-Associates		Can be substituted; inner dimensions should fit operant test box comfortably, with room for acoustical foam; fit with fan - 55-60 dB www.med-associates.com
Eyeblink System and Software	JSA Designs	N/A	Proprietary and customized for research lab
Heat Shrink Tubing (3/16 in, 1/4 in, 3/8 in, 1/2 in Diameters)	Any		To protect modified commutator cable soldered ends and splices
Melamine Triple Peak Acoustical Foam w/Black Hypalon (24 x 48 in)	McMaster-Carr	9162T5	Can be substituted; cut to fit 4 housing chambers www.mcmaster.com
Operant Test Box (Exterior 12.5 L x 10 W x 13.5 in H), Complete x 4	Med-Associates	ENV-007 Custom Package	With stainless steel grid floor and custom top (3 in hole in center for commutator cable) www.med-associates.com
Oscilloscope (Optional)	Any		Recommended minimum specs: 200 MHz analog bandwidth, 1 GS/s real-time sampling, 4 channels; see www.picotech.com
Piezo Tweeters (Speakers) x 4 (7 x 3 in)	MCM Electronics	53-805	Must match frequency range specifications for eyeblink system (2500 Hz - 25 KHz) www.mcmelectronics.com
Soldering Station, Solder, Flux, Tinner	Any		For soldering 26 AWG cables to female sockets (that fit male relia-tac contact pins) and bipolar plugs
Stimulus Isolators x 4	WPI International	A365	These units run on 16-9V alkaline batteries; a suitable rechargeable version (A365R) is available

			www.wpiinc.com
Tripolar Electrode Cable for SL3C Commutator x 4	Plastics One, Inc.	335-335 80cm TT3 C	Provides plug end to EMG headstage on rat and to commutator; must be modified www.plastics1.com
USB LED Lights x 4	Any		USB-based lights do not cause electrical "noise" with the EMG signals from the rats www.plastics1.com
Webcams x 4, Surveillance Software	Any		
PC Computer Running MS Windows OS	Any		