

Materials List for:

Simultaneous Recording of Electretinography and Visual Evoked Potentials in Anesthetized Rats

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Materials

Name	Company	Catalog Number	Comments
Alligator clip	generic brand	HM3022	Stainless steel 26 mm clip for connecting VEP screw electrodes to cables
Bioamplifier	ADInstruments	ML 135	For amplifying ERG and VEP signals
Carboxymethylcellulose sodium 1.0%	Allergan	CAS 0009000-11-7	Viscous fluid for improving signal quality of the active ERG electrode
Carprofen 0.5%	Pfizer Animal Health Group	CAS 53716-49-7	Proprietary name: Rimadyl injectable (50 mg/ml). For post-surgery analgesia, diluted to 0.5% (5 mg/ml) in normal saline
Chlorhexadine 0.5%	Orion Laboratories	27411, 80085	For disinfecting surgical instruments
Circulating water bath	Lauda-Königshoffen	MGW Lauda	For maintaining body temperature of the anesthetized animal during surgery and electrophysiological recordings
Dental amalgam	DeguDent GmbH	64020024	For encasing the electrode-skull assembly to make it more robust
Dental burr	Storz Instruments, Bausch and Lomb	#E0824A	A miniature drill head of ~ 0.7 mm diameter for making a small hole in the skull over each hemisphere to implant VEP screws
Drill	Bosch	Dremel 300 series	An automatic drill for trepanning
Electrode lead	Grass Telefactor	F-E2-30	Platinum cables for connecting silver wire electrodes to the amplifier
Faraday Cage	custom-made		Ensures light proof to maintain dark adaptation. Encloses the Ganzfeld setup to improve signal to noise ratio
Gauze swabs	Multigate Medical Products Pty Ltd	57-100B	For drying the surgical incision and exposed skull surface during surgery
Ganzfeld integrating sphere	Photometric Solutions International		Custom designed light stimulator: 36 mm diameter, 13 cm aperture size
Velcro	VELCRO Australia Pty Ltd	VELCRO Brand Reusable Wrap	Hook-and-loop fastener to secure the electrodes and the animal on the recording platform
Isoflurane 99.9%	Abbott Australasia Pty Ltd	CAS 26675-46-7	Proprietary Name: Isoflo(TM) Inhalation anaesthetic. Pharmaceutical-grade inhalation

			anesthetic mixed with oxygen gas for VEP electrode implant surgery
Ketamine	Troy Laboratories	Ilium Ketamil	Proprietary name: Ketamil Injection, Brand: Ilium. Pharmaceutical-grade anesthetic for electrophysiological recording
Luxeon LEDs	Phillips Lighting Co.		For light stimulation twenty 5 W and one 1 W LEDs.
Micromanipulator	Harvard Apparatus	BS4 50-2625	Holds the ERG active electrode during recordings
Needle electrode	Grass Telefactor	F-E2-30	Subcutaneously inserted in the tail to serve as the ground electrode for both the ERG and VEP
Phenylephrine 2.5% minims	Bausch and Lomb	CAS 61-76-7	Instilled with Tropicamide to achieve maximal dilation for ERG recording
Povidone iodine 10%	Sanofi-Aventis	CAS 25655-41-8	Proprietary name: Betadine, Antiseptic to prepare the shaved skin for surgery 10%, 500 ml
Powerlab data acquisition system	ADInstruments	ML 785	Controls the LEDs
Proxymetacaine 0.5%	Alcon Laboratories	CAS 5875-06-9	For corneal anaesthesia during ERG recordings
Saline solution	Gelflex		Non-injectable, for electroplating silver wire electrodes
Scope Software	ADInstruments	version 3.7.6	Simultaneously triggers the stimulus via the Powerlab system and collects data
Silver (fine round wire)	A&E metal	0.3 mm	Used to make active and inactive ERG electrodes, and the inactive VEP electrode
Stainless steel screws	MicroFasteners		0.7 mm shaft diameter, 3 mm in length to be implanted over the primary visual cortex and serve as the active VEP electrodes
Stereotaxic frame	David Kopf	Model 900	A small animal stereotaxic instrument for locating the primary visual cortices according to Paxinos & Watson's 2007 rat brain atlas coordinates
Surgical blade	Swann-Morton Ltd.	0206	For incising the area of skin overlaying the primary visual cortex to implant the VEP electrodes
Suture	Shanghai Pudong Jinhuan Medical Products Co.,Ltd		3-0 silk braided suture non-absorbable, for skin retraction during VEP electrode implantation surgery
Tobramycine eye ointment 0.3%	Alcon Laboratories	CAS 32986-56-4	Proprietary name: Tobrex. Prophylactic antibiotic ointment applied around the skin wound after surgery
Tropicamide 0.5%	Alcon Laboratories	CAS 1508-75-4	Proprietary name: 0.5% Mydracil eye drop, Instilled to achieve mydriasis for ERG recording
Xylazine	Troy Laboratories	Ilium Xylazil-100	Pharmaceutical-grade anesthetic for electrophysiological recording
Pipette tip	Eppendorf Pty Ltd	0030 073.169	Eppendorf epTIPS 100 - 5,000 ml, for custom-made electrodes
Microsoft Office Excel	Microsoft	version 2010	spreadsheet software for data analysis

Lethabarb Euthanzia Injection	Virbac (Australia) Pty Ltd	LETHA450	325 mg/ml pentobarbital sodium for rapid euthanzia
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