

Materials List for

Direct-Coupled Electroretinogram (DC-ERG) for Recording the Light-Evoked Electrical Responses of the Mouse Retinal Pigment Epithelium

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Materials

Name	Company	Catalog Number	Comments
Ag/AgCl (mouth) Electrode	WPI Inc	EP1	Mouth reference electrode for mouse
Ceramic Tile	Sutter Instrument	CTS	Used to cut the glass capillary tube to an appropriate size
Cotton Tipped Cleaning Stick	Puritan Medical Products	867-WC No Glue	To be used as a spacer to improve the fit of the electrode holder assembly
Electroretinogram (ERG) System	Diagnosys LLC	E3 System	Visual electrophysiology system to diagnose ophthalmic conditions in vision research and drug trials
Bunsen Burner	Argos Technologies	BW20002460	Or equivalent to shape glass under flame
Glass Capillary Tube (1.5 mm)	Sutter Instruments	BF150-75	For filling with HBSS and making contact to the cornea
Hank's Buffered Salt Solution (HBSS)	Thermo Fisher Scientific Inc	14175-095	Commercially available. Maintain at RT
In-Line Filter	Whatman	6722-5001	To protect vacuum pump from aerosols
Low Noise Cable for Microelectrode Holders	WPI Inc	5372	Suggested for improving the length and placement of the cables and electrode holder assemblies
Magnetic Ball Joint	WPI Inc	500871	For magnetically positioning the electrode holder assembly on the stage
MatLab	Mathworks		MatLab: For editing the analysis software
MatLab Curvefit Toolbox	Mathworks		Toolbox for MatLab (only required for editing the analysis software)
MatLab Compiler	Mathworks		Toolbox for MatLab (only required for editing and re-releasing the analysis software)

MatLab Runtime version 9.5	Mathworks	R2018b (9.5)	Required to run the analysis software: https://www.mathworks.com/products/compiler/matlab-runtime.html
Microelectrode Holders (45 degrees)	WPI Inc	MEH345-15	For holding the capillaries
Needle (25 ga)	Covidien	8881250313	For filling the capillary tubes with HBSS
Needle (ground) Electrode	Rhythmink	13mm - one electrode	Subdermal needle electrode (ground) for mouse (13mm long, 0.4mm diameter needle, 1.5m leadwire)
Regulator/Power Conditioner	Furman	P-1800	Or equivalent to remove DC-offset from noise introduced through power line
Syringe (12 mL)	Monoject	1181200777	For filling the capillary tubes with HBSS
T-clip	Cole-Parmer	06852-20	For electrode holder assembly
Vacuum Desiccator	Bel-Art	420120000	Clear polycarbonate bottom & cover
Pharmacological treatment			
Lubricant eye gel	Alcon	0078-0429-47	Helps lubricate corneal surface and maintain electrical contact with capillary electrodes
Phenylephrine Hydrochloride 2.5%	Akorn	17478-201-15	Short acting mydriatic eye drops (for pupil dilation)
Proparacaine Hydrochloride 0.5%	Akorn	17478-263-12	Local anesthetic for ophthalmic instillation
Tropicamide 0.5%	Akorn	17478-101-12	Short acting mydriatic eye drops (for pupil dilation)
Xylazine	AnaSed	sc-362949Rx	Analgesic and muscle relaxant
Zetamine (Ketamine HCl)	VetOne	501072	Anesthetic for intramuscular injections