Materials List for: Electrophysiological Method for Recording Intracellular Voltage Responses of Drosophila Photoreceptors and Interneurons to Light Stimuli In Vivo

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Materials

Name	Company	Catalog Number	Comments
Stereo Zoom Microscope for making the fly preparation	Olympus	SZX12 DFPLFL1.6x PF eyepieces: WHN30x-H/22	Capable of ~150X magnification with long working distance; bespoke heavy steel table mount stand
Stereomicroscope in the intracellular set-up	· Olympus	Olympus SZX7; eyepieces: WHN30x-H/22	30X eyepieces are needed for seeing the electrode tip reflections well when driving it through the small corneal hole into the eye
Nikon microscope	Nikon SMZ645; eyepieces: C- W30x/7		
Anti-vibration Table	Melles Griot	With metric M6 holes on the breadboard	Our bespoke rigs have a large hole drilled through the thick breadboard that lets in the fly preparation platform pole (houses a copper heatsink with electronics) from below
Newport			
Micromanipulators	Narishige	Narishige NMN-21	In our intracellular set-ups, different micromanipulator systems are used for driving the shap recording electrodes into the fly eye. All the listed manipulators are succesfully providing long-lasting stable recordings from Drosophila photoreceptors and LMCs.
Huxley Bertram	Huxley xyz-axis with fine manual control		
Sensapex	Sensapex triple axis		
Märzhäuser	Märzhäuser DC-3K with additional x-axis piezo stepper and MS 314 controller		
Magnetic Stands	Any magnetic base with on/off switch will do		For example, to manage cables inside the Faraday cage
Electrode Holders	Harvard Apparatus	ESP/W-F10N	
Silver Wire	World Precision Instruments	AGW1510	0.3 - 0.5 mm diameter; needs to be chloridized for the electrode holders
Fiber Optic Light Source	Many different, including Olympus		
Fiber Optic Bundles	UltraFine Technology		To deliver the LED light stimulus to the Cardan arm system. We use both liquid and quartz light guides (range from UV to IR)
Thorn Labs			



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Single-electrode current/voltage- clamp microelectrode amplifier npl SEC-10LX Mttp://www.npleiectromic.de/ and/www.npleiectromic.de/ microelectrode-clamp/sec-10LX.html Outstanding performer! Head-stage Standard (+/- 150 nA) For npl SEC-10LX Many of our stimulus systems are in-house built EED light sources and drivers 2-channol OpticED (Cairn Research Lud, UK) Many of our stimulus systems are in-house built Many of our stimulus systems are in-house built Self-designed and constructed Ensure that PC or Mac is compatible with table acquisition acquisition and Analyses Software Self-designed and constructed Ensure that PC or Mac is compatible with table acquisition gystem and advistant Cardan arm system Self-designed and constructed Ensure that PC or Mac is compatible with table acquisition gystem and advisate Ensure that PC or Mac is compatible with table acquisition gystem and advisate Petitier temperature control system Self-designed and constructed Ensure that PC or Mac is compatible with table acquisition gystem and advisate Filamented Doscillace Class Capiliaries Self-designed and constructed Electromagnetic noise shielding Filamented Ouart Class Capiliaries Suff restructed Compatible with table acquisition gystem and advisate Electromagnetic noise shielding Inner diameter: 0.5 - 0.7 mm Ensure that PC or Table Electromag	Fly Cathing Tube		P80-50P 50ml Cent. Tube PP., Pack of 100 Pcs	
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Petroleum jelly Vaselin	the filamented recording	Salts from Fisher Scientific	10010310, KCl	
	Petroleum jelly	Vaselin		

Non-stainless steel razor blades			
Blade holder/breaker	Fine Science Tools By Dumont	10053-09	9 cm
Blu-tack	Bostik		Alternatively, use molding clay
Forceps	Fine Science Tools By Dumont	11252-00	#5SF (super-fine tips)