

Materials List for:

# Electrophysiological Method for Whole-cell Voltage Clamp Recordings from *Drosophila* Photoreceptors

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## Materials

| Name                                   | Company            | Catalog Number                     | Comments  |
|--|--------------------|------------------------------------|---|
| 10 mL syringe                          |                    |                                    |   |
| 5 mL syringe                           |                    |                                    |   |
| 1 mL syringe with elongated tip        |                    |                                    |   |
| Petri dish                             |                    |                                    | 60 mm   |
| Syringe filters                        | Millex             |                                    | 22 µm PVDF filter   |
| Capillaries (for ommatidia separation) |                    |                                    | Glass, 1.2 x 0.68 mm (~7.5 cm each)                                   |
| Polyethylene Tubing                    | Becton Dickinson   |                                    | 1.57 x 1.14 mm (35 cm)  |
| 2 small beakers                        |                    |                                    | 50 mL or less   |
| 2 paraffin film sheets                 | Parafilm M         |                                    | ~5 x 5 cm   |
| Bath chamber                           | home-made          |                                    |   |
| Cover slips                            |                    |                                    | 22 x 22 mm No. 0  |
| Paraplast Plus                         | Sigma              | Paraffin – polyisobutylene mixture | To glue the coverslip onto the bottom of the bath chamber             |
| Ground                                 | Warner Instruments | 64-1288                            | Hybrid Assembly Ag-AgCl Wire Assembly                                 |
| Headless micro dissection needle       |                    |                                    | Entomology, 12 mm   |
| Micro dissecting needle holder         |                    |                                    |   |
| Vise                                   |                    |                                    |   |
| 2 fine tweezers + 1 rough tweezers     |                    | Dumont #5, Biology                 | 0.05 x 0.02 mm, length 110 mm, Inox                                   |
| Stereoscopic zoom Microscope           | Nikon              | SMZ-2B                             |   |
| Cold light source                      | Schott             | KL1500 LCD                         |   |
| Filter (Color) for cold light source   | Schott             | RG620                              |   |
| Delicate wipers                        | Kimtech            |                                    | Kimwipes  |
| Electrode holder                       | Warner Instruments | QSW-T10P                           | Q series Holders compatible with Axon amplifiers, straight body style |
| Silver Wire                            | Warner Instruments |                                    | 0.25 mm diameter, needs to be chloridized                             |
| Micromanipulator                       | Sutter Instruments | MP 85                              | Huxley-Wall Style Micromanipulator                                    |
| Faraday cage                           | home made          |                                    | Electromagnetic noise shielding and black front curtain               |
| Anti-vibration Table                   | Newport            | VW-3036-OPT-01                     |   |
| Osilloscope                            | GW                 | GOS-622G                           |   |

|   |                         |  |   |
|---|-------------------------|--|---|
| Perfusion system                                  | Warner Instruments      | VC-8P  | Pinch valve control system                              |
| Perfusion valve controller                        | Scientific instruments  | BPS-8  |   |
| Suction system                                    |                         |  |   |
| Amplifier   | Molecular Device        | Axopatch-1D                                    |   |
| Head-stage  | Molecular Device        | CV - 4   | Gain: x 1/100   |
| A/D converter                                     | Molecular Device        | Digidata 1440A                                 |   |
| Clampex   | Molecular Device        | 10   | software  |
| pCLAMP  | Molecular Device        | 10   | software  |
| Light source (Xenon Arc lamp)                     | Sutter Instruments      | Lambda LS                                      |   |
| Light detector                                    | home made               |  | phototransistor   |
| Filter wheel and shutter controller               | Sutter Instruments      | Lambda 10-2 with a Uniblitz shutter            |   |
| Filters (Natural density filter)                  | Chroma                  | 6,5,4,3,2,1,0.5,0.3                            |   |
| Filter (Color)                                    | Schott                  | OG590, Edge filter                             |   |
| Xenon Flash Lamp system                           | Dr. Rapp OptoElectronic | JML-C2   |   |
| Light guide                                       |                         |  | Quartz  |
| Pulse generator                                   | AMPI                    | Master 8                                       |   |
| Microscope  | Olympus                 | IX71, Inverted                                 |   |
| Red illumination filter (Microscope)              |                         |  | RG630 / RG645 ø45mm                                     |
| Microscope objective                              | Olympus                 | X60/0.9 UplanFL N air or X60/1.25 UplanFI oil  |   |
| CCD Camera  | Andor                   | iXon DU885K                                    |   |
| NIS Element                                       | Nikon                   | AR   | software  |
| Ca <sup>2+</sup> indicator                        | Invitrogen              | Calcium green 5N                               |   |
| Excitation & emission filters and dichroic mirror | Chroma                  | 19002 - AT - GFP/FITC Longpass set             |   |
| Vertical pipette puller                           | Narishige               | Model PP83                                     | Use either vertical or horizontal puller, as preferred. |
| Horizontal pipette puller                         | Sutter Instrument       | Model P-1000 Flaming/Brown Micropipette Puller |   |
| Filament  | Sutter Instrument       |  | 3 mm trough or square box                               |
| Capillaries                                       | Harvard Apparatus       | borosilicate glass capillaries                 | 1 x 0.58 mm   |