

Materials List for:

Surgical Ablation Assay for Studying Eye Regeneration in Planarians

Jacob M. Morton^{*1}, Marwa A. Saad^{*1}, Wendy S. Beane¹

¹Department of Biological Sciences, Western Michigan University

*These authors contributed equally

Correspondence to: Wendy S. Beane at wendy.beane@wmich.edu

URL: <https://www.jove.com/video/55594>

DOI: [doi:10.3791/55594](https://doi.org/10.3791/55594)

Materials

Name	Company	Catalog Number	Comments
Instant Ocean sea salts	Spectrum Brands	SS15-10	"10 Gallon" box (net weight 3 lbs)
Kimwipes EX-L lint-free tissue wipe	Kimberly-Clark	34155	4.5 x 8.5 in
Whatman #2 filter paper	Sigma	WHA1002125	Circles, 125 mm diameter, white
Easy Touch Insulin syringe (with needle)	Pet Health Market	17175-04	U-100 1 cc syringe, 31 G 5/16 in needle
100 mm Petri dish	VWR	25384-342	100 mm x 15 mm
60 mm Petri dish	VWR	25384-092	60 mm x 15 mm
Dumont #5 forceps	Fine Science Tools	11254-20	Inox, straight tip , 11 cm
Transfer pipettes	Samco Scientific	225	Graduated, large bulb, 7.5 mL, non sterile
Parafilm M paraffin film	Brand	701606	4 in x 125 ft roll
12-well untreated tissue culture plate	VWR	15705-059	Untreated, flat bottom, sterile, Falcon brand
Plastic food containers (for colony)	Ziploc	Large rectangle	2.25 qt (2.12 L), 10" x 6 -3/4 " x 3 -3/16"
Planaria (<i>Girardia tigrina</i>)	Carolina Biological	132954	Sold as "Brown" Planaria; most often they are <i>G. tigrina</i> (aka <i>Dugesia tigrina</i>), but sometimes are <i>G. dorocephala</i> (aka <i>Dugesia dorocephala</i>); either will work.
Planaria (<i>Schmidtea mediterranea</i>)	n/a	n/a	<i>S. mediterranea</i> are not commercially available. At this time animals are only obtainable from laboratories that use them and have extra animals.
Brown paper towels	Grainger	2U229	9-3/16 x 9-3/8" 1-Ply Multifold Paper Towel, UNBLEACHED
Wash bottle (for worm water), optional	VWR	16650-275	Wash Bottles, Low-Density Polyethylene, Wide Mouth, 500 mL
Anti-synapsin antibody, optional	Developmental Studies Hybridoma Bank	3C11	Supernatant
Anti-arrestin antibody, optional	n/a	n/a	Not commercially available. Kind gift from Michael Levin, Tufts University
Nalgene Lowboy carboy with spigot (for storing worm water), optional	Nalge Nunc International Corporation	2324-0015	15 L, polypropylene, low profile makes it easier to fill plastic colony containers
Custom Peltier plate, optional	Williams Machine, Foxboro, MA	n/a	Design specifics courtesy of Junji Morokuma, Tufts University: Peltier plate is constructed of a standard thermoelectric heat pump (for example, All Electronics Corp

			Catalog # PJT-1, 30 mm ²). The square heat pump is covered with a thin mirrored surface, then placed inside a 30 mm ² square hole in a circular plexiglass form (~50 mm in diameter). This form is of similar thickness to the heat pump, and fits flush into a well tooled in the center of a round heat sink (~115 mm in diameter). The form/heat pump is "anchored" to the sink with silicone base heat sink compound. The leads are threaded through holes drilled through both the form and the heat sink. The bottom half of the heat sink is tooled into a "foot" that fits into the opening of your microscope's base plate.
DC power source (for Peltier plate), optional	B & K Precision	1665	Regulated Low Voltage DC Power Supply, 1-18 V (DC), 1-10 amps.
Other common supplies			
Gloves			
Razor blade			
Scissors			
Dissecting scope with gooseneck lighting			
Chopstick rests, optional			