

Materials List for

An Improved Assay and Tools for Measuring Mechanical Nociception in *Drosophila* Larvae

Roger Lopez-Bellido¹, Michael J. Galko^{1,2,3}

¹Department of Genetics, The University of Texas MD Anderson Cancer Center ²Neuroscience Graduate Program, Graduate School of Biomedical Sciences, The University of Texas MD Anderson Cancer Center ³Genetics and Epigenetics Graduate Program, Graduate School of Biomedical Sciences, The University of Texas MD Anderson Cancer Center

Corresponding Authors

Roger Lopez-Bellido
Rlopez5@mdanderson.org

Michael J. Galko
mjgalko@mdanderson.org

Citation

Lopez-Bellido, R., Galko, M.J. An Improved Assay and Tools for Measuring Mechanical Nociception in *Drosophila* Larvae. *J. Vis. Exp.* (), e61911, doi:10.3791/61911 (2020).

Date Published

October 29, 2020

DOI

10.3791/61911

URL

jove.com/video/61911

Materials

Name	Company	Catalog Number	Comments
Beaker	Fisher Scientific	02-540C	Beaker of 10 ml of capacity. Any similar container will do.
Black (Arkansas) bench stone	Dan's Whetstone	SKU: I200306B24b-HQ-BAB-622-C	Used to smoothe any irregularities of the nitinol wire tips. https://www.danswhetstone.com/product/special-extra-wide-black-bench-stone-6-x-2-1-2-x-1-2/
Confocal microscope	Olympus	FV1000	Any equivalent confocal microscope will do
Coplin Jar	Fisher Scientific	08-816	https://www.fishersci.com/shop/products/fisherbrand-glass-staining-dishes-10-slides-screw-cap/08816#?keyword=08-816
Diethyl ether	Fisher Scientific	E138-500	For anesthetizing larvae.
Etherization chamber			This is a homemade customized chamber. Please see details of its construction in our previous published paper ¹² . The purpose of the etherization chamber is allow entry of diethyl ether fumes but prevent larval escape.
Fiber Optic Light Guide	Schott AG	A08575	Schott Dual Gooseneck 23 inch
Forceps	Fine Science Tool	FS-1670	For transferring larvae
Glue	Aleene's	N/A	Aleene's® Wood Glue, formerly called (Aleene's All-Purpose Wood Glue) https://www.aleenes.com/aleenes-wood-glue
Graspable holder	Loew Cornell	N/A	Loew-Cornell Simply Art Wood Colored Craft Sticks, 500 pieces.
Halocarbon oil 700	Sigma	H8898-100ML	
Hypodermic needle 30G 1/2"L	Fisher Scientific	NC1471286	BD Precisionglide® syringe needles, gauge 30, L 1/2 inches. Used to

			make a hole into the wooden holder for the nitinol wires
Large Petridish	Falcon	351007	60 mm x 10 mm Polystyrene Petridish
Microscope (Zeiss) Stemi 2000	Carl Zeiss, Inc.	NT55-605	Any equivalent microscope will do
Microscope Cover Glass 22x22	Fisher	12-545-B	
Microscope Cover Glass 22x40	Corning	2980-224	Thickness 1 1/2
Microscope Slides	Globe Scientific Inc.	1358Y	
Mini Diagonal Cutter	Fisher Scientific	S43981	For cutting nitinol filaments
Nitinol filaments, Diameters: 0.004", 0.006", 0.008"	Mailin Co	N/A	Fifteen pieces of each diameter of 12" length were ordered. https://malinco.com/
Piece of black vinyl	Office Depot	N/A	We use a small piece of vinyl cut from a binder. Dark color provides contrast. A small piece allows orientation of the larva
Small Petridish	Falcon	351008	35 mm x 10 mm Polystyrene Petridish
Spatula	Fisher Scientific	21-401-10	Double-Ended Micro-Tapered Stainless Steel Spatula. Used to place the food in the petri dish
Wipes	Fisher Scientific	06-666A	Kimipes KMTECH, Science Brand. Used to dry larvae of excess moisture.
<i>w¹¹¹⁸</i>	Bloomington Drosophila Stock Center	3605	Control strain for behavioral assays
<i>ppk-Gal4>UAS-mCD8-GFP</i>	Bloomington Drosophila Stock Center	8749	Strain for fluorescent labeling of class IV md neurons