

# Optimizing Sample Preparation Process for Transmission Electron Microscopy of Neuromuscular Junctions in *Drosophila* Larvae

Gan Guangming<sup>1,2</sup>, Sheng Qingyuan<sup>3</sup>, Ou Yutong<sup>1</sup>, Chen Mei<sup>3</sup>, Zhang Chenchen<sup>1</sup>

<sup>1</sup>The School of Medicine, Southeast University <sup>2</sup>The Key Laboratory of Developmental Genes and Human Disease, Southeast University <sup>3</sup>The School of Life Science and Technology, Southeast University

## Corresponding Authors

Gan Guangming

ganguangm@seu.edu.cn

Sheng Qingyuan

shengqingyuan@seu.edu.cn

## Citation

Guangming, G., Qingyuan, S., Yutong, O., Mei, C., Chenchen, Z. Optimizing Sample Preparation Process for Transmission Electron Microscopy of Neuromuscular Junctions in *Drosophila* Larvae. *J. Vis. Exp.* (199), e64934, doi:10.3791/64934 (2023).

## Date Published

September 15, 2023

## DOI

10.3791/64934

## URL

jove.com/video/64934

## Materials

Name	Company	Catalog Number	Comments
1,2-Epoxypropane	SHANGHAI LING FENG CHEMICAL REAGENT CO., LTD	JYJ 037-2015	Penetrating Agent
Drosophila Stocks	Bloomington	none	The wild-type control <i>Drosophila</i> strains used in this research were all W <sup>1118</sup> , and were reared according to standard culture methods
Flat-bottomed glass test tubes	Haimen Chenxing Experimental equipment Company	none	Flat-bottomed glass test tubes(bottle)with sponge plug(or bottle stopper)
K4M cross-linker	Agar Scientific	Cat# 1924B	The embedding resins are based on a highly cross-linked acrylate and methacrylate formula
K4M resin (monomer B)	Agar Scientific	Lot# 631557	Resin Monomer
Polyvinyl film	Haimen Chenxing Experimental equipment Company	none	Transparent polyethylene film is the best , thickness of about 0.2mm
SPI Chem DDSA	SPI	Spl#02827-AF	Dodecenyl Succinic Anhydride
SPI-Chem DMP-30 Epoxy	SPI	02823-DA	Accelerator
SPI-Chem NMA	SPI	Spl#02828-AF	Hardner for Epoxy
SPI-PON 812 Epoxy	SPI	SPI#0259-AB	Resin Monomer
Steel mesh	Yuhuiyuan Gardening Store(online)	none	Copper or stainless steel net
Transmission electron microscopy	Hitachi H-7650	11416692	All grids (on which samples were gathered) were stained with lead citrate and observed under a transmission electron microscopy.
Ultrathin microtome	Leica UC7 ultrathin microtome	595915	All sectioning operations are carried out on a Leica UC7 ultrathin microtome using a diamond knife