

Materials List for:

Laminectomy and Spinal Cord Window Implantation in the Mouse

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Materials

Name	Company	Catalog Number	Comments
3D printer	Raise3D	Pro2	For printing backplates
PLA 3D printing filament	Inland	PLA+-175-B	Black plastic 3D printing material
3D CAD software	Dassault Systemes	Solidworks software	used to design 3D shapes
3D printer software	Raise3D	Ideamaker software	software used to interface with the 3D printer
3D printed oval backplate	custom		Stabilizing imaging field
Surgical dissecting microscope	Leica	M205 C	Equipped with Leica FusionOptics, Planapo 0.63x M-series objective, and gliding stage
Microscope camera	Leica	MC170	HD color camera for visualizing surgical field
Gliding stage	Leica	10446301	The gliding stage is constructed of two metal plates. The base plate is fixed. The upper plate slides on greased interface to allow rotational and linear movement.
Surgical station and stabilization fork	Whale Manufacturing	custom	Laminectomy
SomnoSuite low-flow isoflurane delivery unit	Kent Scientific	SS-01	Surgical anesthesia administration with integrated digital vaporizer
Stainless steel 1.5 inch mounting post	ThorLabs	P50/M	For mounting surgical station onto optical table for two-photon imaging
Counterbored Clamping Fork for 1.5" mounting Post	ThorLabs	PF175	For stabilizing surgical station mount onto optical table for two-photon imaging
Ideal bone microdrill	Harvard apparatus	72-6065	Thinning bone for laminectomy
Water bath	Fisher Scientific	15-462-10	Warming saline
Cautery gun	FST	18010-00	Cauterizing minor bleeds
Heating pad	Benchmark	BF11222	1.9" x 4.5" silicone heater with 20" Teflon leads, 10W, 5V
K type thermocoupled rectal probe	Physitemp	RET3	Measuring mouse body temperature
petroleum jelly	Sigma	8009-03-8	Lubricating rectal probe
Feedback-regulated thermal controller	custom	NA	Commercially available alternatives include the Physitemp TCAT series
PVA Surgical eye spears	Beaver-visitec international	40400-8	Absorbing blood
Electric trimmer	Wahl	41590-0438	Trimming mouse fur
Blade, #11	FST	14002-14	Surgical tool
Forceps, #5	FST	11254-20	Surgical tool

Forceps, #4	FST	14002-14	Surgical tool
Titanium toothed forceps	WPI	555047FT	Surgical tool
Titanium Iris scissors	WPI	555562S	Surgical tool
Vetbond tissue adhesive	3M	084-1469SB	Preparing tissue surface for dental acrylic
Ceramic mixing tray	Jack Richeson	420716	Mixing dental acrylic agent with accelerant
Orthojet dental acrylic	Lang Dental	1520BLK, 1503BLK	Permanently bonding backplate to tissue
Small round cover glass, #1 thickness, 3 mm	Harvard apparatus	64-0720	optical window
NaCl	Fisher Scientific	7647-14-5	For aCSF
KCl	Fisher Scientific	7447-40-7	For aCSF
Glucose	Fisher Scientific	50-99-7	For aCSF
HEPES	Sigma	7365-45-9	For aCSF
MgCl ₂ ·6H ₂ O	Fisher Scientific	7791-18-6	For aCSF
CaCl ₂ ·2H ₂ O	Fisher Scientific	10035-04-8	For aCSF
Carprofen	Rimadyl	QM01AE91	Analgesia
Bacteriostatic water	Henry Schein	2587428	Diluent for carprofen
Isoflurane	Henry Schein	11695-6776-2	Anesthesia
Lactated ringer solution	Baxter	0338-0117-04	Hydration for mouse
Agarose High EEO	Sigma	A9793	gel point 34-37 degrees C
Ophthalmic lubricating ointment	Akwa Tears	68788-0697	Prevent corneal drying
MOM Two-Photon Microscope	Sutter		