

Materials List for

Microelectrode Array Recording of Sinoatrial Node Firing Rate to Identify Intrinsic Cardiac Pacemaking Defects in Mice

Praveen Kumar¹, Man Si¹, Kelsey Paulhus¹, Edward Glasscock¹

¹Department of Biological Sciences, Southern Methodist University

Corresponding Author

Edward Glasscock
eglasscock@smu.edu

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jove.com/video/62735

Materials

Name	Company	Catalog Number	Comments
4-Aminopyridine	Sigma	A78403-25G	
22 gauge syringe needle	Fisher Scientific	14-826-5A	Used for dissection
23 gauge syringe needle	Fisher Scientific	14-826-6C	Used for dissection
60mm Petri Dishes	Genesee Scientific	32-105G	
500mL Pyrex Bottle	Fisher Scientific	06-414-1C	Used to store solutions
1000 mL Pyrex Bottle	Fisher Scientific	06-414-1D	Used to store solutions
Bone Forceps	Fine Science Tools	16060-11	
Calcium chloride dihydrate (CaCl ₂ ·2H ₂ O)	Sigma-Aldrich	C5080-500G	
Carbogen (95% O ₂ , 5% CO ₂)			
Castroviejo Scissors, 4"	Fine Science Tools	15024-10	
D-(+)-Glucose	Sigma-Aldrich	G7021-1KG	
Data Acquisition PC			CPU: Intel Xeon or Intel Core i7, Memory: 8GB, HDD: 1TB, Graphic Card: NVIDIA or On-board, Screen: 1920x1080
Dissection Microscope	Jenco		
Dissecting Pins	Fine Science Tools	26002-20	
Dumont #2 Laminectomy Forceps	Fine Science Tools	11223-20	
Dumont #55 Forceps	Fine Science Tools	11295-51	
Extra Fine Graefe Forceps	Fine Science Tools	11152-10	
Glass Chamber	Grainger	49WF30	Used for mouse euthanization
Harp Anchor Kit	Warner Instruments	SHD-22CL/15 WI 64-0247	
HCl	Fisher Chemicals	SA48-4	Used for pH balancing
Hemostat	Fine Science Tools	13013-14	
Heparin	Aurobindo Pharma Limited IDA, Pashamylaram	NDC 63739-953-25	

HEPES	Sigma-Aldrich	H3375-250G	
Inverted Microscope	Motic	AE2000	
Isoflurane	Patterson Veterinary	07-893-1389	
Lab Tape	Fisher Scientific	15-950	
Light for Dissection Microscope	Dolan-Jenner	MI150DG 660000391014	
Magesium chloride (MgCl ₂)	Sigma-Aldrich	208337-100G	
MED64 Head Amplifier	MED64	MED-A64HE1S	
MED64 Main Amplifier	MED64	MED-A64MD1A	
MED64 Perfusion Cap	MED64	MED-KCAP01	
MED64 Perfusion Pipe Holder Kit	MED64	MED-KPK02	
MED64 ThermoConnector	MED64	MED-CP04	
Mesh	Warner Instruments	640246	
Microelectrode array (MEA)	Alpha Med Scientific	MED-R515A	
Mobius Software	WitWerx Inc.		Specific software for the MED64
NaOH	Fisher Chemicals	S320-500	Used for pH balancing
Normal Saline	Ultigiene	NDC 50989-885-17	
Paint Brush	Fisher Scientific	NC1751733	
Parafilm	Genesee Scientific	PM-996	
Peristaltic Pump	Gilson	F155009	
Peristaltic Pump Tubing	Fisher Scientific	14-171-298	1/8" Interior Diameter
Polyethyleneimine	Sigma	P3143	
Potassium chloride (KCl)	Sigma-Aldrich	P9333-500G	
Potassium phosphate monobasic (KH ₂ PO ₄)	Sigma-Aldrich	P5655-500G	
Sodium Bicarbonate	Sigma	S6297	
Sodium chloride (NaCl)	Fisher Scientific	S671-3	
Sylguard Elastomer Kit	Dow Corning	184 SIL ELAST KIT 0.5KG	
Sodium Phosphate Monobasic	Sigma	S6566	
Sodium tetraborate	Sigma	S9640	
Surgical Scissors	Fine Science Tools	14074-09	
Transfer Pipets (3mL graduated)	Samco Scientific	225	