

Materials List for:

Microstructured Devices for Optimized Microinjection and Imaging of Zebrafish Larvae

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Materials

Name	Company	Catalog Number	Comments
Dow Corning Sylgard 184 Polydimethylsiloxane (PDMS)	Ellsworth Adhesives	184 SIL ELAST KIT 0.5KG	For casting the devices. Kit includes PDMS monomer and Initiator
Low gelling temperature agarose	Sigma Aldrich	A9414-10G	For casting agarose devices
PFDS silane	Sigma Aldrich	448931-10G	For casting of negative PDMS molds
Tricaine (MS-222)	Sigma Aldrich	E10521-10G	To anesthetize zebrafish
Rhodamine Dextran 70,000 Da	ThermoFisher	D1818	To trace microinjections
Leukotriene B4 (LTB4)	Cayman Chemicals	20110	Neutrophil chemoattractant
N-Formylmethionine-leucyl-phenylalanine (fMLP)	Sigma Aldrich	F3506-50MG	Neutrophil chemoattractant
15 cm Petri dish	Fisher scientific	08-757-148	For Casting from the master wafer
Glass-bottom 6-well plates	MatTek	P06G-0-20-F	For imaging devices
Borosilicate glass microcapillaries	World Scientific Instruments	TW-100-4	For microinjection needles
Transfer pipettes	Sigma Aldrich	Z350796	For transferring zebrafish embryos
Microloader tips	Fisher scientific	E5242956003	For loading the microinjection needles
Harris Uni-Core 1.5 mm punch	Ted Pella Inc.	15111-15	To punch ports in PDMS imaging devices
No. 11 Scalpel	Fine Science Tools	10011-00	For cutting PDMS
Dumont No. 5 Forceps	Fine Science Tools	11252-10	For dechorionating embryos and breaking microinjection needle tips
Marzhauser Micromanipulator	ASI	MM33-R	For manipulating microinjection needle
Magnetic stand	MSC	SPI - 87242624	For mounting micromanipulator
MPPI-3 Picopump controller	ASI	MPPI-3	To control microinjection volume and timing
EVOS inverted fluorescent microscope	ThermoFisher	EVOS FL	To image injected embryos
Dissecting microscope	Nikon	SMZ745	For visualizing microinjection
AutoCAD software	Autodesk		Download AutoCAD files from: https://dx.doi.org/10.6084/m9.figshare.4282853 and on the ZFIN community protocols wiki page: https://wiki.zfin.org/display/prot/ZFIN+Protocol+Wiki