

Materials List for:

Planar Gradient Diffusion System to Investigate Chemotaxis in a 3D Collagen Matrix

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Materials

Name	Company	Catalog Number	Comments
Silicone elastomer kit	Dow Corning Corp	182 SIL ELAST KIT .5KG	a two-part mixture with a 10:1 mix
Live cell imaging chamber	Live Cell Instrument	CM-B18-1	CMB for 18 mm round coverslips
22 mm Glass Coverslip	Fisher Scientific	NC0180281	Neuvitro Corp. cover slip 22 mm 1.5
Machined aluminum metal cube			
Hobby utility knife	X-Acto	X3201	
3-(aminopropyl) trimethoxysilane	Sigma-Aldrich	281778-5ML	
Glutaraldehyde	Polysciences, Inc	00216A-10	Glutaraldehyde, EM Grade, 8%
50 ml tube	Fisher Scientific	14-432-22	Standard floor model and tabletop centrifuges
Glass Petri dish	Fisher Scientific	08-747A	Reusable Petri Dishes: Complete (60 x 15 mm)
Forceps	Fisher Scientific	22-327-379	Fine Point Forceps
Cover glasses	Fisher Scientific	12-518-105A	Rectangle; 30 x 22 mm; Thickness No. 1
Tridecafluoro-1,1,2,2-tetrahydrooctyl	Gelest	SIT8174.0	
Acetic acid	Sigma-Aldrich	320099	Acetic acid ACS reagent, ≥99.7%
Hexane	Sigma-Aldrich	296090	anhydrous, 95%
Ethyl alcohol	Sigma-Aldrich	E7023	200 proof, for molecular biology
High-precision diamond scribing tool	Lunzer	PV-081-3	Straight extended tip scribe, .020" (.50 mm) diameter by .200" (5.0 mm) tip length
Vacuum grease	Dow Corning	14-635-5C	High-Vacuum Grease
15 ml tube	Fisher Scientific	14-959-49D	15 ml conical centrifuge tubes with hydrophobic, biologically inert surface
10x phosphate buffered solution	Fisher Scientific	BP399-500	1.37 M Sodium Chloride, 0.027 M Potassium Chloride, and 0.119 M Phosphate Buffer
1 N sodium hydroxide	Sigma-Aldrich	38215	Sodium hydroxide concentrate
Collagen I, rat tail	BD Biosciences	354236	Rat tail
Micro centrifuge tube	Fisher Scientific	02-681-332	Volume: 2.0 ml; O.D. x L: 13 x 40 mm; sterile; single-wrapped
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Carboxylate-modified microspheres	Invitrogen	F-8813	Carboxylate-modified microspheres, 0.5 μm , yellow-green fluorescent (505/515), 2% solids
Rhodamine	Sigma-Aldrich	83689	Rhodamine B for fluorescence