

Materials List for:

AFM and Microrheology in the Zebrafish Embryo Yolk Cell

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Materials

Name	Company	Catalog Number	Comments
Inverted optical microscope	Nikon	TE2000	Visualization of the sample and AFM cantilever
Atomic force microscope (AFM)	Custom made	-	Any commercialized AFM could be employed
Inverted Confocal microscope	Zeiss	LSM780	Nanorheology data collection
Agarose D1 Low EEO	Conda	8016.00	Casting embryos
Ultrapure LMP Agarose (low melting)	Invitrogen	16520-100	Securing embryos
Zebrafish Microinjection and Transplantation Molds	World Precision Instruments	Z-MOLDS	Casting embryos. Custom made with the original dimensions can also be employed
Dumont 5 Forceps	FST	11251-20	1.5 mm diameter
Si ₃ N ₄ cantilever	Novascan	PT.GS	Measuring the embryo by AFM. Spherical tip: 4.5 μm diameter and k=0.01 N/m
Fluorescent nanoparticles	Life Technologies	FluoSpheres F8811,	For tracking nanorheology
Micropipette puller	Sutter Instruments	P-2000	Fabricating tailored microneedles
Borosilicate capillary glass	Warner Instruments	G100TF-4	Fabricating tailored microneedles
Micromanipulator	Narishige	MN-153	Manipulating the micropipette
Microinjector	Eppendorf	FemtoJet Express	Controlling injection time and pressure
Stereomicroscope	Leica	DFC365FX	Visualization of the embryos during injection
Analysis Software	MathWorks	Matlab	Analyzing AFM and particle tracking data
Zebrafish	AB and TL wild type	-	Strains employed for embryo collection
Glass Bottom Plates	Mat Tek	P35G-0.170-14-C	Mounting embryos for nanorheology data collection
Stage micrometer	FST	29025-02	Measuring injection volume