

Materials List for:

Frequency Mixing Magnetic Detection Scanner for Imaging Magnetic Particles in Planar Samples

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Materials

Name	Company	Catalog Number	Comments
Magnetic particles "SiMAG Silanol"	Chemicell (http://www.chemicell.com)	1101-5	Aqueous dispersion of magnetic silica particles, Maghemite, dia. 1 µm
Magnetic nanoparticles "fluidMAG-Amine"	Chemicell (http://www.chemicell.com)	4121-5	Aqueous dispersion of magnetic nanoparticles, Magnetite, dia. 50 nm
Microtube 10 µl	Hirschmann Laborgeräte (http://www.hirschmann-laborgeraete.de/?sc_lang=en)		volume 10 µl, outer diameter 400 µm, length 40 mm
Nitrocellulose Membrane Biotodyne B	Thermo Scientific (http://www.thermoscientific.com)	77016	Biotodyne B Nylon Membrane, 0.45 µm, 8 cm x 12 cm
DDS chip AD9834	Analog Devices (http://www.analog.com)	AD9834	20 mW Power, 2.3 V to 5.5 V, 75 MHz Complete DDS
Operational Amplifier AD829	Analog Devices (http://www.analog.com)	AD829	High Speed, Low Noise Video Op Amp
Analog Multiplier MPY634	Texas Instruments (http://www.ti.com)	MPY634	Wide Bandwidth Precision Analog Multiplier
High-Speed Buffer BUF634	Texas Instruments (http://www.ti.com)	BUF634	250 mA High-Speed Buffer
Operational Amplifier OPA627	Texas Instruments (http://www.ti.com)	OPA627	Precision High-Speed Difet(R) Operational Amplifiers
Operational Amplifier TL072	Texas Instruments (http://www.ti.com)	TL072	Dual Low-Noise JFET-Input General-Purpose Operational Amplifier
Lock-In Amplifier SR830	Stanford Instruments (http://www.thinksrs.com)	SR830	100 kHz DSP lock-in amplifier
XYZ motorized stage	Sciencetown, Incheon, Korea (http://mkmsll.en.ec21.com/)		
Cleanroom wiper	Seoul Semitech Co (http://www.seoulsemi.com)	CF-909	dimension 2.0 mm × 18 mm