

Materials List for:

Nanomechanics of Drug-target Interactions and Antibacterial Resistance Detection

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Materials

Name	Company	Catalog Number	Comments
Scentris		Scentris, Veeco Instruments, Inc	Not in production
Six-way valve		MVP, Hamilton, Reno, NV	Enables multiple concentration injection
EB Evaporator		BOC Edwards Auto 500, UK	Electron beam is preferable because of deformation of cantilevers caused by thermal heating problems
Storage vessel		Agar Scientific, UK	Keeps gold coated films fresh
Glass capillary		King Precision Glass, Claremont, CA, USA	For capillary functionalization of the cantilever arrays
Pump		Model Genie Plus, Kent Scientific, Torrington, CT, USA	Good for controlled flow rate of liquid samples in microfluidic channels
0.2-4.5 µm Filters	1511940001	Merck Millipore	For sample filtering
Cantilever chips		London Centre for Nanotechnology (LCN)	Highly sensitive
Sodium phosphate monobasic	10049-21-5	Sigma-Aldrich, UK	For making buffer solutions
Sodium phosphate dibasic	7558-79-4	Sigma-Aldrich, UK	For making buffer solutions
Polysorbate 80 (PS80) or Tween 80	9005-65-6	Sigma-Aldrich, UK	Used in buffer solutions to prevent nonspecific interactions on glassware
DI water		Millipore Co., Billerica, MA, USA	Used for making solutions
Whole serum	GEM-700-110-H	Sera Laboratories International Ltd, UK	Used in measurements that mimic physiological conditions
Vancomycin (Van)	1404-93-9	Sigma-Aldrich, UK	Drug used
Sulfuric acid	7664-93-9	Sigma-Aldrich, UK	Used for glassware cleaning procedures
Hydrogen peroxide	7722-84-1	Sigma-Aldrich, UK	Used for glassware cleaning procedures
D-Ala and D-Lac		London Centre for Nanotechnology (LCN)	Surface receptors coated on the cantilever for detecting drug-target interactions
LabView		National Instruments Co., Austin, TX, USA	Software used for instrumental interface to allow controlled measurements