

Materials List for:

Ultrasensitive Detection of Biomarkers by Using a Molecular Imprinting Based Capacitive Biosensor

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URL: <https://www.jove.com/video/57208>

DOI: [doi:10.3791/57208](https://doi.org/10.3791/57208)

Materials

Name	Company	Catalog Number	Comments
Glass Cover slips	ThermoFisher	102222	protein stamp
HCl	Sigma-Aldrich	H1758-500ML	cleaning
NaOH	Sigma-Aldrich	72068-100ML	cleaning
Ultrasonic cleaner	Branson Ultrasonic	BRANSONIC M1800- E	cleaning
3-amino-propyl-triethoxysilane (APTES)	Sigma-Aldrich	A3648-100ML	modification
EtOH	Sigma-Aldrich	1009836010	rinsing/cleaning
glutaraldehyde	Sigma-Aldrich	G5882-100ML	cross-linker
acetone	Sigma-Aldrich	34850-1L-M	cleaning
H ₂ SO ₄	Sigma-Aldrich	339741-100ML	piranha solution
H ₂ O ₂	Sigma-Aldrich	H1009-500ML	piranha solution
tyramine	Sigma-Aldrich	T90344-5G	modification
CompactStat	Ivium Technologies	CompactStat.h: 30mA@10V/3MHz	potentiostat
Platinum Counter Electrode Kit	Equilibrium	AFCTR5	potentiostat
Reference Electrode	Equilibrium	RREF0021	potentiostat
acryloyl chloride	EMD Millipore	8.00826.0100	modification
triethylamine	EMD Millipore	8.08352.0100	modification
toluene	Sigma-Aldrich	244511-100ML	modification
N-hydroxymethyl acrylamide	Sigma-Aldrich	245801-100G	functional monomer
poly ethylene glycol-400-dimethacrylate	Sigma-Aldrich	409510-250ML	cross-linker
2-Hydroxy-4'-(2-hydroxyethoxy)-2-methylpropiophenone	Sigma-Aldrich	410896-50G	functional monomer
UV polymerizator	Dymax	Dymax 5000ECE	UV-polymerization
forceps	Sigma-Aldrich	Z168777-1EA	consumable
1-dodecanethiol	Sigma-Aldrich	471364-100ML	blocking agent
acrylamide	Sigma-Aldrich	A3553-100G	functional monomer
N-hydroxymethylacrylamide	Sigma-Aldrich	245801-100G	functional monomer
N-isopropylacrylamide	Sigma-Aldrich	415324-50G	functional monomer
methylenebisacrylamide	Sigma-Aldrich	146072-500G	cross-linking monomer
N,N,N',N'-tetramethylethyldiamine (TEMED)	Sigma-Aldrich	T9281-25ML	catalyst
ammonium persulphate	Sigma-Aldrich	A3678-25G	initiator
Capacitive biosensor	CapSenze		Equipment
Glycine	Merck	1042011000	regeneration buffer

Tween-20	Sigma-Aldrich	P9416-50ML	regeneration buffer
Trizma base	Sigma-Aldrich	93352-1KG	running buffer
Na ₂ HPO ₄ • 2H ₂ O	Calbiochem	567547-1KG	running buffer
NaH ₂ PO ₄ • 2H ₂ O	Calbiochem	567549-1KG	running buffer
DELPHI correlative light and electron microscope	Phenom-World		equipment
Capacitive gold electrodes	CapSenze Biosystems		consumables
2,2'-azobis(2-methypropionitrile)	Sigma-Aldrich	441090-25G	photo-initiator
CapSenze Smart Software	CapSenze Biosystems		software program