

Materials List for:

A Droplet-Based Microfluidic Approach and Microsphere-PCR Amplification for Single-Stranded DNA Amplicons

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Materials

Name	Company	Catalog Number	Comments
liquid polydimethylsiloxane, PDMS	Dow Corning Inc.	Sylgard 184	Components of chip
40% Acrylamide:bis solution (19:1)	Bio-rad	1610140	Components of Copolymerizable oligo-microsphere
Ammonium persulfate, APS	Sigma Aldrich	A3678	Hardener of acrylamide:bis solution
N,N,N',N'-Tetramethylethylenediamine, TEMED	Sigma Aldrich	T9281	Catalyst of ammonium persulfate
Mineral oil	Sigma Aldrich	M5904	Table 1. Solution III. Component of microsphere reagents
Cy3 labeled complementary oligonucleotide probes	Bioneer	synthesized	Table 3. Sequence information
ssDNA acrydite labeled probe	Bioneer	synthesized	Table 1. Solution I. Component of microsphere reagents
Tris	Biosesang	T1016	Components of TE buffer, pH buffer solution
EDTA	Sigma Aldrich	EDS	Components of TE buffer, removal of ion (Ca ²⁺)
Ex taq	Takara	RR001A	ssDNA amplification
Confocal microscope	Carl Zeiss	LSM 510	Identifying oligonucleotides exposure of microsphere surface
Light Microscope	Nikon Instruments Inc.	eclipse 80i	Calculating number of microspheres
T100 Thermal Cycler	Bio-rad	1861096	ssDNA amplification
Hand-held Corona Treater	Electro-Technic	BD-20AC Laboratory Corona Treater	Hydrophilic surface treatment
Hot plate	As one	HI-1000	heating plate for curing of liquid PDMS
Syringe pump	kd Scientific	78-1100	Uniform flow of Solution I and Solution II
Compressor	Kohands	KC-250A	Flow control of Solution III
Bright-Line Hemacytometer	Sigma Aldrich	Z359629	Calculating number of microspheres