

Materials List for:

Enhanced Genetic Analysis of Single Human Bioparticles Recovered by Simplified Micromanipulation from Forensic 'Touch DNA' Evidence

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Materials

Name	Company	Catalog Number	Comments
SealRite 1.5 ml natural microcentrifuge tubes, sterile	USA Scientific	1615-5510	numerous alternative suppliers are available, but tubes should be sterile
0.2 ml PCR tubes with flat cap, natural	Phenix Research	MPX-200F	or equivalent
Kimwipes	Fisher Scientific	06-666 and/or 06-666-11C	
Alcohol prep pads	Fisher Scientific	06-669-62	alternative is 06-665-24 (Fisher Sci); canister of larger alcohol wipes rather than individual pads
Sterile water			18.2 MΩ, autoclaved
Glass microscope slides, frosted, 3" x 1": 1 mm	Fisher Scientific	12-544-3	alternative brands or sizes are acceptable
Disposable transfer pipet	Fisher Scientific	13-711-9D	alternatives are acceptable
Trypan blue solution	Sigma	T8154	
Pipets: 0.2-2, 2-20, 10-100, 100-1,000 µl	various		
Sterile, aerosol-resistant pipet tips	various		
Mini-centrifuge	various		
Stereomicroscope	Leica	M205C	others are suitable, but must be capable of magifications up to 350X
GeneAmp PCR system 9700 thermal cycle (silver or gold block)	Life Technologies	N8050200 or 4314878	other models and manufacturers can be used, but performance with the STR amplification kit must be verified
3130 Genetic Analyzer	Life Technologies	3130-01	alternatives: 310 or 3500 Genetic Analyzers (Life Technologies)
GeneMapper software	Life Technologies	various	various versions of the software are available and can be used
WF Gel-Film , x8 retention level	Gel-Pak	WF-40-x8-A	4" x 4" wafer film; can be ordered in other size specifications
Double sided tape	various		
Glass block, 3" x 1.5" x 3/8"	McCrone Microscopes and Accessories	370-2	or equivalent
Name	Company	Catalog Number	Comments
Tungsten needle with holder	McCrone Microscopes and Accessories	106	

3M water soluble wave solder tape, 5414 transparent	Allied Electronics	70113977	
Lysis buffer (forensicGEM Saliva, Zygem)	VWR	95043-992	Lysis buffer is prepared in 10 μ l portions (prepare additional master mix portions as needed to accommodate the desired number of samples). 1.5 μ l is used for each sample. To prepare 10 μ l of lysis buffer (sufficient for ~6 samples): 6.9 μ l sterile water, 2.1 μ l 10x buffer - blue, 1 μ l forensicGEM.
STR Amplification kit, AmpFISTR Identifier Plus PCR amplification kit	Life Technologies	4427368	Alternative STR amplification kits can be used, but performance would have to be verified by user. The amplification mix is prepared as follows (volumes per sample): 2.2 μ l PCR reaction mix, 1.1 μ l Primer set, 0.2 μ l (1U) AmpliTaq Gold DNA polymerase. A master mix sufficient for the desired number of samples should be prepared. 3.5 μ l of the prepared mix is added to the 0.2 ml tube for bioparticle collection.
AmpliTaq Gold DNA polymerase	Life Technologies	N808-0245	
HiDi formamide	Life Technologies	4311320	
GeneScan 500 LIZ size standard	Life Technologies	4322682	
96 well optical reaction plates	Life Technologies	N8010560	
Plate septa, 96 well	Life Technologies	4315933	
Performance-optimized polymer, POP-7	Life Technologies	4363785	Alternatives such as POP-4 are acceptable