

**Inclusive list of Instrumentation and Reagents/Materials:**Instrumentation for both procedures

Table Top Centrifuge for pelleting 50mL conical tubes  
Micropipets and the appropriate tips  
microfuge  
thermocycler  
nanodrop spectrophotometer for determining DNA concentrations before PCR  
37°C heat block or water bath  
agarose gel electrophoresis rig  
UV Transilluminator

Reagents for both procedures

50mL conical tubes for collection of cheek cells  
Sterile PBS (137 mM NaCl, 2.7 mM KCl, 10 mM Na<sub>2</sub>HPO<sub>4</sub>, 1.8 mM KH<sub>2</sub>PO<sub>4</sub>, pH 7.4)  
microfuge tubes (2mL, 1.5mL, and 0.65mL)  
PCR tubes  
Taq PCR kit (New England Biolabs: E5000S)  
ApaI (New England Biolabs: R0114)  
SacI (New England Biolabs: R3156)  
10 mM Tris pH 8  
sterile water  
forward primer: 5'-GGAGAGCGATGGGGAG (Integrated DNA Technologies)  
reverse primer: 5'-CTTGAGCACCCAGAATAC (Integrated DNA Technologies)  
agarose  
TAE Buffer (0.04 M Tris-acetate, 0.001 M EDTA)  
Ethidium bromide (10 mg/mL; Sigma-Aldrich: E1510)  
100bp ladder (New England Biolabs: N3231)  
Gel loading dye (New England Biolabs: B7025S)

Additional Reagents and Instrumentation for Procedure 1

Lysis Buffer (20 mM Tris-HCl pH 8, 50 mM NaCl, 10 mM EDTA, 0.5% SDS, and 100 µg/mL  
Proteinase K)  
Phenol (Sigma-Aldrich: P4557)  
Phenol:chloroform (Sigma-Aldrich: 77617)  
Chloroform (Sigma-Aldrich: C2432)  
70% ethanol  
isopropanol  
proteinase K (Sigma-Aldrich: P4032)  
3 M sodium acetate, pH 5.5  
50°C water bath  
Fume Hood  
Vortex

Additional Reagents for Procedure 2

DNAzol (Invitrogen Cat #10503-027)

100% ethanol

75% ethanol

8 mM NaOH

1 M HEPES