Solutions

Extraction buffer (100 mM Tris-HCl, 50 mM EDTA, 50 mM NaCl, 10% SDS - pH 7.5, ca. 32 mL H2O)

For 100 samples (50 mL solution)

10 grams SDS (Sodium Dodecyl Suflate , d = 1.01 g/cm3)
146.1 mg Sodium Chloride (NaCl, mw = 58.4 g/mol)
930.6 mg EDTA (EthyleneDiamineTraacetic Acid Disodium Salt dihydrate, mw = 372.24 g/mol)
Add 20 mL deiH2O
5 mL Tris-HCl pH 8.0 (1 molar- kept in fridge)
Fill to 50 mL with deiH2O
Auto clave on 'Liquid' setting for 15 minutes.
Dissolution may require heat and stirring (3 & 4 settings respectively, ca. 15 min.)

10% CTAB solution (20 mM Tris-Cl pH. 8.0, 1.4 M NaCl, 10 mM EDTA pH 7.5, 10% CTAB, 5% PVP, 40 mL DiH2O)

For 100 samples (50 mL solution)

add ~30 mL diH2O,
1 ml Tris-HCl pH 8.0 (1 molar- kept in fridge; 2-Amino-2-(hydroxymethyl)propane-1,3-diol)
4.08 g Sodium Chloride (NaCl, mw = 58.4 g/mol)
4 mL EDTA pH 7.5 (0.125 molar – kept in fridge; 2,2',2",2"'-(Ethane-1,2-diyldinitrilo)tetraacetic acid)
5 g CTAB (hexadecyl(trimethyl)ammonium bromide, mw = 364.45, FYI this is 274 mM)
Auto clave on 'Liquid' setting for 15 minutes.

2.5 g PVP-40 (1-ethenylpyrrolidin-2-one) – add after autoclave
Fill to 50 mL with deiH2O
Dissolution of PVP will require 2-3 hrs, at 65°c with stirring. Before use allow one hour of stirring and heat to resuspend all salts in the solution.

Sodium acetate solution (3mM)

For 100 samples (10 mL solution)

20.4 mg Sodium Acetate trihydrate (mw = 136.08 g/M)
to 50 mL deiH2O
Auto clave on 'Liquid' setting for 15 minutes.

Phenol-chloroform Isoamyl alcohol (25:24:1) Saturated with 10 mM Tris pH 8.0, EDTA

For 100 samples (50 mL solution) (no need to make, is bought)

25 mL Phenol
24 mL Chloroform (Trichloromethane)
1 mL Isoamyl alcohol

Literature cited

Lalhmangaibi, R., Ghatak, S., Laba, R., Gurusubramian, G., Jumar, N.S. *Protocol for Optimal Quality and Quantity Pollen DNA Isolation from Honey Samples.* 2014. Journal of Biomolecular Techniques 25:92-95

Guertler, P., Eicheldinger, A., Muschler, P. Goerlich, O., Bursch, U. *Automated DNA extraction from pollen in honey* 2014. Food Chemistry 149:302-306