Solution Preparation

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2X CTAB Buffer	**(Per 800 ml)**
100 mM Tris-HCl (pH8.0)	80 ml 1 M Tris-HCl pH 8.0
1.2 M NaCl	192 ml 5 M NaCl
20 mM EDTA	32 ml 0.5 M EDTA
2% CTAB	16.0 g powder
0.2% β- mercaptoethanol	add right before use (1/500 vol)

EDTA, 0.5 M (500 ml stock, pH 8.0)
93.0 g EDTA (disodium ethylenediaminetetra-acetate·$2H_2O$) in 400 ml of H_2O
Adjust pH to 8.0 (~10 g NaOH pellet), it dissolves when pH is right, add H_2O to 500 ml

Ethidium bromide, 10 mg/ml
Dissolve 0.2 g ethidium bromide in 20 ml H_2O. Mix well and store at 4°C in dark
CAUTION: Ethidium bromide is a mutagen and must be handled carefully.

KCl, 1 M
74.6 g KCl
H_2O to 1 liter

MgCl2, 1 M
20.3 g $MgCl_2 \cdot 6H_2O$
H_2O to 100 ml

MgSO4, 1 M
24.6 g $MgSO_4 \cdot 7H_2O$
H_2O to 100 ml

NaCl, 5 M
146.1 g NaCl
Add H_2O to 500ml

TBE (Tris/borate/EDTA) electrophoresis buffer *1 liter:*
108 g Tris base (890 mM)
55 g boric acid (890 mM)
40 ml 0.5 M EDTA, pH 8.0 (see recipe; 20 mM)

1x TE buffer	**Per 500 ml**
10 mM Tris-HCl (pH 8.0)	5 ml 1 M Tris-HCl
1 mM EDTA (pH 8.0)	1 ml 0.5 M EDTA
	add H_2O to 500 ml

Tris·Cl *[tris(hydroxymethyl)aminomethane]****, 1 M***
Dissolve 121 g Tris base in 800 ml H_2O
Adjust to desired pH with concentrated HCl
Mix and add H_2O to 1 liter

Approximately 70 ml of HCl is needed to achieve a pH 7.4 solution, and approximately 42 ml for a solution that is pH 8.0.

NOTE: *The pH of Tris buffers changes significantly with temperature, decreasing approximately 0.028 pH units per 1C. Tris-buffered solutions should be adjusted to the desired pH at the temperature at which they will be used. Because the pKa of Tris is 8.08, Tris should not be used as a buffer below pH ~7.2 or above pH ~9.0.*

dNTP dilution from Boehringer Mannheim

To make an 800□l stock dNTP with final concentration 1.25mM of ea. dNTP:
The concentration for each original dNTP is 10□mole/100□l=0.1M
Take 10 □l 0.1M dNTP <u>each</u> into 760 □l dH_2O

TLE (for RNA extraction)

0.2M Tris
0.1M LiCl
5mM EDTA pH8.2

Preparation in 1L:
10ml 0.5M EDTA
4.25g LiCl
DEPC treated and autoclave
--> add 22.88g Tris HCl
add 6.64g Tris base
--> bring up to 1000ml with DEPC H2O