Common Reagents for Molecular Cloning

TE

10 mM Tris-HCl (pH 8.0)
1 mM EDTA (pH 8.0)

Tris-acetate (TAE) 50 x Stock solution (final:0.04 M Tris–acetate and 0.001 M EDTA)

Tris base	242 g
Glacial acetic acid	57.1 ml
0.5 M EDTA (pH 8.0)	100 m
dH_2O	adjust to final volume of 1L

Tris-borate (TBE) 10 x Stock solution (final:0.045 M Tris–borate and 0.001 M EDTA)

Tris base	54 g
0.5 M EDTA (pH 8.0)	20 m
dH_2O	adjust to final volume of 1L

5 M NaCl

NaCl	292.2 g
dH_2O	adjust to final volume of 1L

1. Dissolve NaCl in 800 ml dH_2O, heat to 68C to assist dissolution.
1. Adjust to final volume of 1L and sterilize by autoclaving.

20% SDS

SDS (electrophoresis-grade)	100 g
dH_2O	adjust to final volume of 1L

2. Dissolve SDS in 900 ml dH_2O, heat to 68˚C to assist dissolution.
3. Adjust pH to 7.2 by adding a few drops of concentrated HCl and the final volume to 1L.

3 M sodium acetate (pH 5.2)

sodium acetate.$3H_2O$	408.1 g
dH_2O	adjust to final volume of 1L

1.Dissolve sodium acetate.3H_2O in 800 ml dH_2O, adjust pH to 5.2 with glacial acetic acid
2. Adjust to final volume of 1L and sterilize by autoclaving.

10 M Ammonium acetate

ammonium acetate 770 g
dH_2O adjust to final volume of 1L

1. Dissolve ammonium acetate in 800 ml dH_2O, adjust pH to 5.2 with glacial acetic acid
2. Adjust to final volume of 1L and sterilize by filtration.

0.5 M EDTA (pH8.0)

EDTA.2Na.2H_2O 186.1 g
dH_2O adjust to final volume of 1L

1. Dissolve EDTA in 800 ml dH_2O, adjust pH to 8.0 with NaOH (~20 g NaOH pellets)
2. Adjust to final volume of 1L and sterilize by autoclaving.

10 mg/ml Ethidium bromide

Ethidium bromide 1g
dH_2O adjust to final volume of 100 ml
-Note: store in a dark bottle at r.t.

20 mg/ml Proteinase K

1. Dissolve proteinase K at a concentration of 20 mg/ml in dH_2O and dispense into aliquots and store at –20˚C.
   -Note: Concentration in reaction is 50 µg/ml in reaction buffer (0.01 M Tris-HCl pH 7.8, 0.005 M EDTA and 0.5% SDS) for 37~56˚C.

RNase A

1. Dissolve pancreatic RNase A at a concentration of 10 mg/ml in 10 mM Tris-HCl (pH 7.5) and 15
   mM NaCl.
2. Heat to 100˚C for 15 min, Allow to cool slowly to r.t. Dispense into aliquots and store at –20˚C.

Last Modified 06/03/05