**Common Buffers**

**10X TE Buffer** 100mM Tris-Cl, pH 7.4 or 7.6

10mM EDTA, disodium salt, dehydrate, MW 372.24, pH 8.0

**50 X TAE**

For 1 Liter:

700 ml dH2O 242 g

Tris base, MW 121.14

18.6 g EDTA, disodium salt, dehydrate, MW 372.24

-Mix until EDTA goes into solution

-Add 57.1 ml Glacial Acetic Acid

-Mix and bring volume up to 1 liter (1x= 0.04M Tris-acetate 1mM EDTA)

**50X TAE (low EDTA)**

For 1 liter:

242 g Tris base, MW 121.14

3.72 g EDTA, disodium salt, dehydrate, MW 372.24

-Add 700 mL dH2O.

-Mix until reagents go into solution

**THEN ADD**

57.1 mL of Glacial Acetic Acid

-Mix and bring volume up to 1 liter (1x= 0.04M Tris-acetate 0.2mM EDTA)

**20X TBE**

For 1 liter:

216g Tris base, MW 121.14

14.9g of EDTA, disodium salt, dehydrate, MW 372.24

-Mix Tris base and EDTA with 500ml ddH2O until dissolved

-Add 110g Boric Acid

-Bring up to 1 liter with ddH2O

-Filter sterilize and then autoclave

**SM**

For 1 liter:

**ingredient: amount: [final]**

Tris-HCl pH 7.5: 50 ml of 1 M: 50 mM

MgSO4 7-H2O: 2 grams (or 1 gram w/anhydrous): 5 mM

NaCl: 5.8 grams: 0.2 M

gelatin: 1 gram: 0.1%

-Autoclave (gelatin will not go into solution until heated), aliquot into 50 ml polypro. tubes, reautoclave

**20X SSPE**

For 500ml: 3.6 M NaCl: 105.2 g

0.2M PO4 buffer: 100 mls 1 M

20mM EDTA: 20 mls of 0.5 M

-Autoclave and (optional) DEPC treat

**20X SSC**

For 1 liter:

NaCl: 175.3g: 3M

Na citrate: 88.2g: 0.15M

H2O: 800ml

-Add a few drops of HCl and pH at 7.0

-Autoclave

**IPTG**

+Final concentration in plates, 0.5mM, either use 25ul per ml of cell or spread on X-Gal plates. +When adding to plates, per liter of plates add 5 mls of 100mM IPTG or 0.119grams of IPTG, bring up in 1 ml of water, filter sterilize with 0.2 micronfilter prior to adding to cool medium.

**PHOSPHATE BUFFER**

For 500ml:

1M NaH2PO4 (Monobasic): 69g

1M Na2HPO4 (Dibasic): 71g

pH 7.2

140ml of 1M Monobasic

360ml of 1M Dibasic

**OR**

pH 7.0

195ml of 1M Monobasic

305ml of 1M Dibasic

500ml total;

-bring vol. to 1 liter and pH at 900ml

**Red Loading Dye**

60% Sucrose

1mM Cresol Red 5%

Yellow Food dye