TABLE A.2. PREPARATION OF STOCK SOLUTIONS

Solution	Method of preparation	Comments
1 M Tris	Dissolve 121.1 g Tris base in 800 ml of H_2O. Adjust the pH to the desired value by adding concentrated HCl.	If the 1 M solution has a yellow color, discard it and obtain better-quality Tris.
desired pH: pH 7.4 pH 7.6 pH 8.0	Approximate amount of concentrated HCl: 70 ml 60 ml 42 ml	Although many types of electrodes do not accurately measure the pH of Tris solutions, suitable electrodes can be obtained from most manufacturers.
	Allow the solution to cool to room temperature before making the final adjustments to the pH. Make up the volume of the solution to 1 liter. Dispense into aliquots and sterilize by autoclaving.	
0.5 M EDTA (pH 8.0)	Add 186.1 g of disodium ethylene diamine tetraacetate · $2H_2O$ to 800 ml of H_2O. Stir vigorously on a magnetic stirrer. Adjust the pH to 8.0 with NaOH (~ 20 g of NaOH pellets). Dispense into aliquots and sterilize by autoclaving.	The disodium salt of EDTA will not go into solution until the pH of the solution is adjusted to approximately 8.0 by the addition of NaOH.
5 M NaCl	Dissolve 292.2 g of NaCl in 800 ml of H_2O. Adjust volume to 1 liter. Dispense into aliquots and sterilize by autoclaving.'	
1 M $MgCl_2$	Dissolve 203.3 g of $MgCl_2 \cdot 6H_2O$ in 800 ml of H_2O. Adjust volume to 1 liter. Dispense into aliquots and sterilize by autoclaving.	$MgCl_2$ is extremely hygroscopic. Buy small bottles (e.g., 100 g) and do not store opened bottles for long periods of time.
3 M Sodium acetate (pH 5.2)	Dissolve 408.1 g of sodium acetate · $3H_2O$ in 800 ml of H_2O. Adjust pH to 5.2 with glacial acetic acid. Adjust volume to 1 liter. Dispense into aliquots and sterilize by autoclaving.	

1 M Dithiothreitol (DTT)	Dissolve 3.09 g of DTT in 20 ml of 0.01 M sodium acetate (pH 5.2). Sterilize by filtration. Dispense into 1-ml aliquots and store at −20°C.	Do not autoclave DTT or solutions containing DTT.
β-Mercaptoethanol (BME)	Usually obtained as a 14.4 M solution. Store in a dark bottle at 4°C.	Do not autoclave BME or solutions containing BME.
10% Sodium dodecyl sulfate (SDS) (also called sodium lauryl sulfate)	Dissolve 100 g of electrophoresis-grade SDS in 900 ml of H_2O. Heat to 68°C to assist dissolution. Adjust the pH to 7.2 by adding a few drops of concentrated HCl. Adjust volume to 1 liter. Dispense into aliquots.	Wear a mask when weighing SDS. There is no need to sterilize 10% SDS.
1 M Magnesium acetate	Dissolve 214.46 g of magnesium acetate · $4H_2O$ in 800 ml of H_2O. Adjust the volume to 1 liter. Sterilize by filtration.	
5 M Ammonium acetate	Dissolve 385 g of ammonium acetate in 800 ml of H_2O. Adjust volume to 1 liter. Sterilize by filtration.	
5 M Potassium acetate	To 60 ml of 5 M potassium acetate add 11.5 ml of glacial acetic acid and 28.5 ml of H_2O. The resulting solution is 3 M with respect to potassium and 5 M with respect to acetate.	
20× SSC	Dissolve 175.3 g of NaCl and 88.2 g of sodium citrate in 800 ml of H_2O. Adjust pH to 7.0 with a few drops of a 10 N solution of NaOH. Adjust volume to 1 liter. Dispense into aliquots. Sterilize by autoclaving.	
20× SSPE	Dissolve 174 g of NaCl, 27.6 g of $NaH_2PO_4 \cdot H_2O$, and 7.4 g of EDTA in 800 ml of H_2O. Adjust pH to 7.4 with NaOH (~ 6.5 ml of a 10 N solution). Adjust volume to 1 liter. Dispense into aliquots. Sterilize by autoclaving.	
Ethidium bromide 10 mg/ml	Add 1 g of ethidium bromide to 100 ml of H_2O. Stir on a magnetic stirrer for several hours to ensure that the dye has dissolved. Wrap the container in aluminum foil or transfer to a dark bottle and store at 4°C.	Ethidium bromide is a powerful mutagen. Wear gloves and a mask when weighing it out.
Trichloroacetic acid (TCA) 100% solution	To a bottle containing 500 g of TCA, add 227 ml of H_2O. The resulting solution will contain 100% (w/v) TCA.	