

Lab Solutions

Blue-Dextran/EDTA Buffer (for preparing samples for 377)

25 mM EDTA
50 mg/ml blue dextran

Also available as P/N 402055 from ABI

Digestion/Storage Buffer for Samples (Equivalent to Buff. ATL)

1000 ml

100 ml 1.0M Tris
200 ml 0.5M EDTA
2 ml 5.0M NaCl
100 ml 10% SDS
598 ml H₂O

DTT Solution (for feather digestion)

Add 0.100 g DTT (Dithiothreitol) to 1 ml dH₂O in 1.5 ml microtube.
Vortex until dissolved.

0.5 M EDTA

For 500 ml:

EDTA will not dissolve unless the solution has a pH of 8.0

Dissolve about 7 g of NaOH pellets in ~300 ml of dH₂O, then add 93.1g Na₂EDTA (make sure you are using **disodium** salt and not a different one). Continue adding NaOH pellets until the pH is about 8.0. Now the EDTA will dissolve (it is fairly slow!). Bring volume close to 500 ml, then adjust the pH to 8.0 with 10M NaOH. Adjust the final volume to 400 ml, double-check the pH and adjust as needed.

EtBr Solution

Add 5mg/ml to dH₂O

Loading Buffer for PCR Product

	<u>1X</u>	<u>100X</u>
De-ionized formamide	3.0 ul	300 ul
Dextran/EDTA Buffer	1.2 ul	120 ul
ROX 500	0.3 ul	30 ul

40% 19:1 Polyacrylamide Mixture

!!NOTE!! : Do NOT make this yourself unless you have prior experience making this solution. Required PPEs (Personal Protective Equipment) for making this solution are (1) lab coat, (2) gloves, (3) safety goggles/glasses, (4) Mask-style particulate respirator. Polyacrylamide is a neurotoxin, and the powder may become airborne very easily, potentially entering the lungs. The powder will also give off a neurotoxic gas when the container is open. Thus, caution is needed.

	<u>25ml</u>	<u>50ml</u>
19:1 Bis-Acrylamide powder	10g	20g
MilliQ (ultra-pure) ddH ₂ O	15ml*	30ml*

In a beaker (preferably in a fume hood), combine the powder and the MilliQ water and stir until solute dissolves (5 minutes or so). Add roughly 11% Ion-exchange resin to the mixture and continue stirring for 10 minutes. Filter solution through 2-4 micron filter. Pour solution into an appropriately sized graduated cylinder and bring solution up to the total volume you need using MilliQ ddH₂O. Place solution into an amber 250ml container and put in the refrigerator (protocols are split on whether to store mixture at 2-4 C or at room temperature).

If you feel strangely following the mixing of the solution, do not delay in going to the emergency room. Make sure to carry the bottle (or note its label) with you when you go.

NOTE: You must use MilliQ or equivalent grade water for this solution.

1 M Tris

For 1 L:

Caution: There is Tris-base (MW=121.1) and Tris-Hcl (MW=157.6). Be sure you get the correct one!

Dissolve 121.1 g Tris-base in 700 ml of dH₂O, then adjust to pH 8.0 using concentrated HCl (~15 ml). Dilute to 1000ml with dH₂O, and double check the pH. Adjust as needed with HCl.

TE (Tris-EDTA; 10mM Tris, 1.0 mM EDTA)

For 1 L:

10.0 ml Tris, pH=8.0
2.0 ml 0.5 M EDTA

Bring final volume to 1000 ml with dH₂O

TLE (Tris-Low EDTA; 10 mM Tris, 0.1 mM EDTA)

For 1 L:

10 ml Tris, pH=8.0
200 ul 0.5 M EDTA

Bring final volume to 1000 ml with dH₂O

For 250 ml:

2.5 ml Tris, pH=8.0
50 ul 0.5 M EDTA

10X TBE (Tris-Borate-EDTA)

For 0.5 L:

54.0 g Tris-base
27.5 g Boric Acid
4.15 g EDTA (make sure it is **disodium** salt)
500 ml dH₂O (MilliQ)

For 1 L:

108 g Tris-base
55 g Boric Acid
8.3 g EDTA (make sure it is **disodium** salt)
1000 ml dH₂O (MilliQ)

Try and use within 7-10 days.