

# Stock Solution



TD-S Revision 2.0

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## 1M Tris Buffer - 1 L

### Instructions

1. Dissolve 121.14 g of Tris (Tris Base) ([Tris, GoldBio Catalog # T-400](#) [CAS 77-86-1, mw. = 121.14 g/mol]) in 750 mL of dH<sub>2</sub>O.
2. Adjust to desired pH using concentrated HCl.
3. Fill to final volume of 1 L with dH<sub>2</sub>O.
4. Filter sterilize (recommended) or autoclave.
5. Store at 4°C.

**Note:** Alternatively, equimolar concentrations of Tris base and Tris HCl ([Tris HCl, GoldBio Catalog # T-095](#) [CAS 1185-53-1, mw. = 157.60]) can be mixed to attain a pH of ~ 8.1. The pH can be adjusted by increasing the molar ratio of Tris HCl (more acidic) or Tris base (more basic) and estimated using the Hendersen-Hasselbalch equation.

To make a 1 L solution of 1M Tris, use the table below to estimate the required volume of acid for a given pH:

Starting pH: 10.82  
Adjust pH with: conc. HCl

pH	7.0	7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	9.0
mL	77	75	73	72	70	67	64	61	57	53	49	45	41	37	32	28	25	21	18	15	12

**Note:** This data was collected in GoldBio labs using GoldBio reagents and calculated using 100 ml volumes. All reagent volumes recorded above were adjusted accordingly to create this protocol.

Tris pKa at 25°: 8.06  
Tris pH range: 7.0 – 9.0  
d(pKa)/dT value: -0.028