Stock Solution

TD-S Revision 2.0

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1 M PIPES-Na Buffer - 1 L

Instructions

1. Add 335.34 g of PIPES, Sodium Salt (PIPES, Sodium Salt, GoldBio Catalog # P-280 [CAS 100037-69-2, mw. = 335.34]) to 750 mL of dH_2O. The solution should be at pH ~7.2.

2. Adjust to desired pH using 10N NaOH or concentrated HCl. Using HCl to lower the pH will produce 0.044M – 0.44M NaCl in the concentrated stock solution.

3. Fill to final volume of 1 L with dH_2O.

4. Filter sterilize (recommended) or autoclave.

5. Store at 4°C.

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

Starting pH: 7.2
Adjust pH with: 10N NaOH or conc. HCl

pH	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9	7.0	7.1	7.3	7.4	7.5
mL	37.2	35.5	34.0	31.4	29.3	25.4	21.6	17.5	13.3	8.2	3.7	10	15	20
	Concentrated HCl											10N NaOH		
	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.													

PIPES pKa at 25°: 6.76
PIPES pH range: 6.1 – 7.5
d(pKa)/dT value: -0.0085

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