Phosphate-buffered Saline (PBS)

katy monteith

Abstract

This protocol describes how to make 1 L of PBS to a final concentration of 1x or 10x solution. The solution can be made RNase free with the addition of DEPC (diethyl pyrocarbonate) as in step 5.

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Materials

Hydrochloric acid H1758 by Sigma Aldrich
Sodium chloride S7653 by Sigma Aldrich
Potassium chloride P9333 by Sigma Aldrich
Disodium phosphate S7907 by Sigma Aldrich
Monopotassium phosphate P9791 by Sigma Aldrich
Diethyl pyrocarbonate D5758 by Sigma Aldrich

Protocol

Step 1.
For a final concentration of 1x PBS weigh out the following amount of each reagent: NaCl- 8g, KCl- 0.2 g, Na_2HPO4- 1.44 g, KH_2PO4- 0.24 g. For a final concentration of 10x PBS weigh out the following amount of each reagent: NaCl- 80g, KCl- 2 g, Na_2HPO4- 14.4 g, KH_2PO4- 2.4 g.

Step 2.
Dissolve reagents in 800 mL of triple distilled H_2O using a magnetic stirrer and flea or by manual shaking.

Step 3.
Using a pH meter, adjust pH of solution to 7.4 (or 7.2 if required) by adding concentrated hydrochloric acid (HCl).

Step 4.
Add triple distilled H_2O to bring final volume of solution to 1 L

Step 5.
If require RNase free PBS, add 1 mL of DEPC (diethyl pyrocarbonate) per 1 L of PBS.

Step 6.
Autoclave.

Warnings

Read appropriate SDS for sodium chloride, potassium chloride, disodium phosphate, monopotassium phosphate, hydrochloric acid and diethyl pyrocarbonate before commensing work.

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