

PBS (Phosphate Buffered Saline)

Product	Con.	Cat#	Size
PBS (Molecular Biology Grade)	1X	IBS-BP004	1 L
	1X	IBS-BP004-1	5 L
	10X	IBS-BP007a	1 L
	10X, pH 7.3	IBS-BP007b	1 L
	10X	IBS-BP007a-1	5 L
	20X	IBS-BP007	1 L
	20X	IBS-BP007-1	5 L
PBS (Cell Culture Grade)	1X	IBS-CB013	1 L
	10X	IBS-CB014	1 L
	20X	IBS-CB015	1 L

Components : 1X PBS NaCl 135mM, KCl 2.7mM, Na₂HPO₄ 4.3mM, KH₂PO₄ 1.4mM

Storage Conditions : Room Temperature

Introduction : Phosphate buffered saline (abbreviated PBS) is a buffer solution commonly used in biological research. It is a salty solution containing sodium chloride, sodium phosphate, and (in some formulations) potassium chloride and potassium phosphate. The buffer helps to maintain a constant pH. The osmolarity and ion concentrations of the solution usually match those of the human body (isotonic).

Application : PBS has many uses because it is isotonic and non-toxic to cells. It can be used to dilute substances. It is used to rinse containers containing cells. PBS can be used as a diluent in methods to dry biomolecules, as water molecules within it will be structured around the substance (protein, for example) to be 'dried' and immobilized to a solid surface. The thin film of water that binds to the substance prevents denaturation or other conformational changes. Carbonate buffers may be used for the same purpose but with less effectiveness.

Additives can be used to add function. For example, PBS with EDTA is also used to disengage attached and clumped cells. Divalent metals such as zinc, however, cannot be added as this will result in precipitation. If used in cell culturing, the solution can be dispensed into aliquots and sterilized by autoclaving (20 min, 121°C, liquid cycle).

Sterilization may not be necessary depending on its use. PBS can be stored at room temperature, but may warrant refrigeration to prevent bacterial growth if solution is not sterile and is kept for long periods of time.

Note : In order to provide this product at 20X, 10X the salts in solution are at a very high concentration. However, concentrated stock solutions may precipitate when cooled and should be kept at room temperature until precipitate has completely dissolved before use