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Product Information

Sodium phosphate dibasic
Bioreagent, ≥99.0%
suitable for cell culture
suitable for insect cell culture

Catalog Number **S5136**
Store at Room Temperature

CAS RN 7558-79-4

Product Description
Molecular Formula: Na_2HPO_4
Formula Weight: 141.96

This product is cell culture tested and insect cell culture tested. It is appropriate for use in both cell culture and insect cell culture experiments.

Sodium phosphate is a reagent with very high buffering capacity, widely used in biochemistry, molecular biology, and chromatography. Sodium phosphate occurs in several forms: monobasic (NaH_2PO_4), dibasic (Na_2HPO_4), and tribasic (Na_3PO_4). Most neutral sodium phosphate buffer solutions consist of mixtures of the monobasic and dibasic forms to varying degrees, depending on the desired pH. A table for preparation of 0.1 M sodium phosphate buffer at 25 °C using various proportions of sodium phosphate monobasic and sodium phosphate dibasic has been published.[1]

Some limitations of the usefulness of phosphate buffers include their precipitation of Ca^{2+} and Mg^{2+} ions, inhibition of restriction enzyme activity, and interference in protocols related to DNA ligation and bacterial transformation.[1] A study of the effect of freeze-thaw storage cycles on proteins in sodium phosphate and potassium phosphate buffer solutions has been reported.[2] The effect of 5 mM sodium phosphate on the efficacy of electrospray ionization (ESI) ion mobility spectrometry (IMS) analysis has been evaluated.[3]

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

References
1. Molecular Cloning: A Laboratory Manual, 3rd ed., Sambrook, J. F., et al., Cold Spring Harbor Laboratory Press (Cold Spring Harbor, NY: 2001), p.A1.5.
2. Pikal-Cleland, K.A. et al., Protein denaturation during freezing and thawing in phosphate buffer systems: monomeric and tetrameric beta-galactosidase. Arch. Biochem. Biophys., **384(2)**, 398-406 (2000).
3. Matz, L.M. et al., Evaluation of capillary liquid chromatography-electrospray ionization ion mobility spectrometry with mass spectrometry detection. J. Chromatogr. A., **946(1-2)**, 59-68 (2002).
4. The Merck Index, 14th ed., Entry# 10059.

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