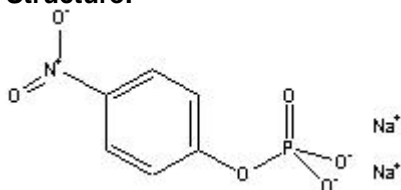


TECHNICAL INFORMATION

Catalog Number: 100878, 194594

p-Nitrophenyl Phosphate, Disodium Salt, Hexahydrate

Structure:


Molecular Formula: C₆H₄NO₆PNa₂·6H₂O

Molecular Weight: 371

CAS # : 4264-83-9

Synonym: pNPP Disodium salt

Physical Description: White to yellow crystalline powder

Solubility: Soluble in water

Description: Suitable of use as a substrate for alkaline and acid phosphatase.

pNPP is the substrate of choice for use with alkaline phosphatase in ELISA procedures. This substrate produces a soluble end product that is yellow in color and can be read spectrophotometrically at 405 nm. The pNPP reaction may be stopped with 3 M NaOH and read at 405 nm.

Recommended Usage: Make a 5 mM solution of pNPP in 0.1 M glycine buffer, 1 mM MgCl₂, 1 mM ZnCl₂, pH 10.4, or 1 M diethanolamine buffer, 0.5 mM MgCl₂, pH 9.8, or to desired concentration (typically a pNPP concentration of 1 mg/ml is used).

Buffer Preparation:

To prepare 0.1 M glycine buffer, 1 mM MgCl₂, 1 mM ZnCl₂, pH 10.4: Add 7.51 g of glycine (MP catalog number 808822, 808831), 203 mg MgCl₂ (MP catalog number #195304) and 136 mg ZnCl₂ (MP catalog number 193899) to approximately 980 ml deionized water and mix. Adjust pH to 10.4 with 19 N NaOH and QS to 1 L with deionized water.

To prepare 1 M diethanolamine buffer 0.5 mM MgCl₂, pH 9.8: Add 97 ml diethanolamine (MP catalog number 150166), 100 mg MgCl₂, and 0.2 g sodium azide (MP catalog number 102891) to 800 ml deionized water, adjust pH to 9.8 with 10 M HCl and QS to 1 L with deionized water.

Stopping Solution: Reaction may be stopped by the addition of 50 ml of 3 N NaOH per 200 ml of reaction mixture.

Availability:

Catalog Number	Description	Size
100878	pNPP disodium salt, hexahydrate	500 mg 1 g 5 g 10 g 25 g 50 g
194594	pNPP disodium salt, hexahydrate, cell culture reagent	250 mg 500 mg 1 g 5 g

Also Available:

Catalog Number	Description	Size
103602	p-Nitrophenyl phosphate, di(cyclohexylammonium) salt	1 g 5 g 25 g 100 g
151766	p-Nitrophenyl phosphate, di(Tris) salt	1 g 5 g 25 g 100 g

980821	p-Nitrophenyl phosphate liquid concentrate (50X, stabilized)	10 ml
980822		100 ml
980811	p-Nitrophenyl phosphate liquid substrate, stabilized, ready-to-use	100 ml
980812		500 ml
980701	p-Nitrophenyl phosphate powder	6 vials with 100 mg each
193556	p-Nitrophenyl phosphate tablets, 5 mg each tablet	6 tablets 60 tablets

References:

- Voller, A., et. al., *Bulletin WHO*, v. **53**, 55 (1976).
- Engvall, E., *Meth. Enzymol.*, v. **70**, 419 (1980).
- Rose, N.R., Friedman, H., and Fahey, J.L., eds., *Manual of Clinical Laboratory Immunology*, **3rd Ed.**, American Society for Microbiology, Washington, D.C. (1986).