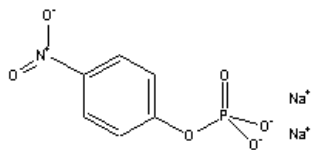


Catalog Number: 100878, 194594

## p-Nitrophenyl Phosphate, Disodium Salt, Hexahydrate

### Structure:



**Molecular Formula:** C<sub>6</sub>H<sub>4</sub>NO<sub>6</sub>PNa<sub>2</sub>·6H<sub>2</sub>O

**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 MgCl<sub>2</sub>, 1 mM ZnCl<sub>2</sub>, pH 10.4, or 1 M diethanolamine buffer, 0.5 mM MgCl<sub>2</sub>, 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 MgCl<sub>2</sub>, 1 mM ZnCl<sub>2</sub>, pH 10.4:* Add 7.51 g of glycine (MP catalog number 808822, 808831), 203 mg MgCl<sub>2</sub> (MP catalog number #195304) and 136 mg ZnCl<sub>2</sub> (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 MgCl<sub>2</sub>, pH 9.8:* Add 97 ml diethanolamine (MP catalog number 150166), 100 mg MgCl<sub>2</sub>, 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 µl of 3 N NaOH per 200 µl 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
<a href="#">103602</a>	<a href="#">p-Nitrophenyl phosphate, di(cyclohexylammonium) salt</a>	1 g 5 g 25 g 100 g

<a href="#">151766</a>	<a href="#">p-Nitrophenyl phosphate, di(Tris) salt</a>	1 g 5 g 25 g 100 g
<a href="#">980821</a>	<a href="#">p-Nitrophenyl phosphate liquid concentrate (50X, stabilized)</a>	10 ml
<a href="#">980822</a>		100 ml
<a href="#">980811</a>	<a href="#">p-Nitrophenyl phosphate liquid substrate, stabilized, ready-to-use</a>	100 ml
<a href="#">980812</a>		500 ml
<a href="#">980701</a>	<a href="#">p-Nitrophenyl phosphate powder</a>	6 vials with 100 mg each
<a href="#">193556</a>	<a href="#">p-Nitrophenyl phosphate tablets, 5 mg each tablet</a>	6 tablets 60 tablets

**References:**

1. Voller, A., et. al., *Bulletin WHO*, v. **53**, 55 (1976).
2. Engvall, E., *Meth. Enzymol.*, v. **70**, 419 (1980).
3. 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).