PRODUCT INFORMATION

4-Nitrophenyl Phenylphosphonate
Item No. 17436

CAS Registry No.: 57072-35-2
Formal Name: P-phenyl-phosphonic acid, mono(4-nitrophenyl) ester
Synonyms: bis(4-Nitrophenyl) Phenylphosphonate, p-Nitrophenyl Phenylphosphonate, NPPP
MF: C₁₂H₁₀NO₅P
FW: 279.2
Purity: ≥98%
UV/Vis.: λmax: 215, 272 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly
Special Conditions: Solution turns yellow with PBS addition

Laboratory Procedures

4-Nitrophenyl phenylphosphonate is supplied as a crystalline solid. A stock solution may be made by dissolving the 4-nitrophenyl phenylphosphonate in the solvent of choice. 4-Nitrophenyl phenylphosphonate is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of 4-nitrophenyl phenylphosphonate in these solvents is approximately 14 and 30 mg/ml, respectively.

4-Nitrophenyl phenylphosphonate is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 4-nitrophenyl phenylphosphonate should first be dissolved in DMF and then diluted with the aqueous buffer of choice. 4-Nitrophenyl phenylphosphonate has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

4-Nitrophenyl phenylphosphonate is a substrate for 5'-nucleotide phosphodiesterases. It is a more preferable substrate to 5'-nucleotide phosphodiesterases than naturally occurring nucleotides or bis(4-nitrophenyl) phosphate because of its stability, ease of synthesis, and higher rate of hydrolysis under saturating conditions.

References