

Pyrophosphate Assay Kit

Cat. No. Kit-0899 **Lot. No.** (See product label)

SPECIFICATION

Product Overview

The Pyrophosphate Assay Kit provides a rapid and highly sensitive enzymatic assay for detecting free pyrophosphate in solution. In this assay the formation of a chromophoric product is detected spectrophotometrically.

See our complete line of Fluorescence Microplate assays.

- Sensitivity limit of 1 mM pyrophosphate (~0.2 g/mL)
- Accommodates a pH range of 6.5 to 8.5

The Pyrophosphate Detection Kit provides a fast, convenient, and inexpensive spectrophotometric method for measuring the inorganic pyrophosphate produced by a number of biochemical reactions, such as DNA and RNA polymerizations, cyclic AMP formation by the enzyme adenylate cyclase, and the enzymatic activation of fatty acids to form their coenzyme A esters.

Description

The Pyrophosphate Assay Kit is a modification of our Phosphate Assay Kit. In the presence of inorganic phosphate, the substrate 2-amino-6-mercapto-7-methylpurine ribonucleoside (MESG) is converted by the purine nucleoside phosphorylase (PNP) enzyme to ribose 1-phosphate and 2-amino-6-mercapto-7-methylpurine. The enzymatic conversion of MESG results in a shift in absorbance maximum from 330 nm to 360 nm. The Pyrophosphate Assay Kit includes the enzyme inorganic pyrophosphatase, which catalyzes conversion of pyrophosphate into two equivalents of phosphate. The phosphate is then consumed by the MESG/PNP reaction and detected by an increase in absorbance at 360 nm. Additional sensitivity is gained by the amplification of one molecule of pyrophosphate into two molecules of phosphate.

Storage

Includes inorganic pyrophosphatase, 2-Amino-6-mercapto-7-methylpurine riboside (M

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ESG), purine nucleoside phosphorylase (PNP), concentrated reaction buffer, Na₂P₂O₇ standard, and detailed protocols for detecting and quantitating pyrophosphate.

Shipping

Room Temperature

Size

100 assays

**Materials Required
but Not Supplied**

Spectrophotometer

Detection method

Colorimetric

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