



## DATA SHEET

Nuclease P<sub>1</sub> from *Penicillium citrinum*  
[Nucleate 5'-nucleotidohydrolase (3'-phosphohydrolase)]  
Penicillium Nuclease P<sub>1</sub> (EC 3.1.30.1)

Lot No. \_\_\_\_\_

Net 500 units

Appearance: Lyophilized powder

Unit definition: One unit of nuclease activity is defined as the amount of enzyme that produces 1.0 μmole of acid soluble nucleotides from RNA basing on  $\epsilon=10,600$  for RNA hydrolyzates, per minute at pH 5.3 at 37°C.  
One unit of the enzyme liberates ca. 4 μmoles of orthophosphate from 3'-AMP per minute at pH 7.2 at 37°C.

Substrate specificity: The enzyme hydrolyzes both 3'-5'- phosphodiester bonds in RNA and heat-denatured DNA and 3'-phosphomonoester bond in mono- and oligonucleotides terminated 3'-phosphate without base specificity.  
The enzyme does not actually attack double-stranded nucleic acids, especially in the presence of more than 400 mM of sodium chloride at pH 6.0.

Stable pH: 5 - 8.

Heat stability: Stable below 60°C at pH 5.3 for 30 min.

Optimum pH: 5.3 for RNA and heat-denatured DNA, and 7.2 for 3'-AMP.

Optimum temperature: Around 70°C. For long incubation, temperature below 60°C is more suitable than 70°C.

Storage: Keep dry in a refrigerator; No detectable decrease in activity within two years.

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