

ENZYMES

BY

SORACHIM

Alkaline Phosphatase from Calf intestine

LPP-209

SPECIFICATIONS

Product name:	Orthophosphoric monoester phosphohydrolase (alkaline optimum)
EC	3.1.3.1
Appearance:	50% glycerol solution
Activity:	Grade II, 30,00 U/ml or more
Contaminants:	Adenosine deaminase $\leq 1.0 \times 10^{-4}\%$, Phosphodiesterase $\leq 3.0 \times 10^{-3}\%$ DNase* RNase**
Stability	Stable at - 20°C for at least 12 months
Molecular weight	approx. 100,000
Isoelectric point	5.7
Michaelis constant	$1.7 \times 10^{-3}M$ (p-Nitrophenyl phosphate)
Inhibitors	Cu^{2+} , Ag^+ , Hg^{2+} , EDTA
Optimum pH	10.0 - 10.3
Optimum temperature	40°C
pH Stability	pH 8.5-10.3 (25°C, 20hr)
Thermal stability	below 40°C (pH 9.5, 30min)

* No degradation of the fragments is observed by agarose gel electrophoresis, after incubation of 1 μ g of λ -DNA with 2 units of alkaline phosphatase for 16 hr at 37°C in a 50 μ l reaction volume.

** No degradation of the fragments is observed by polyacrylamide gel electrophoresis, after incubation of 2 μ g of t-RNA with 2 units of alkaline phosphatase for 16 hr 37°C in a 50 μ l reaction volume.

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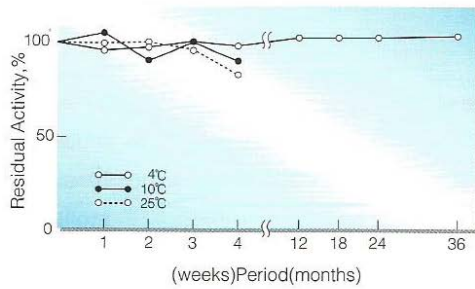


Fig.1. Stability (Liquid form)

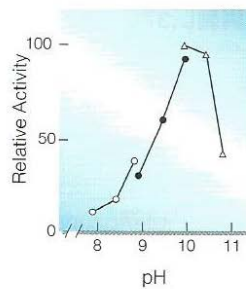


Fig.2. pH-Activity

[37°C, 5min-reaction in 0.1M buffer solution;pH8.0-9.0, Bicine;pH9.0-10.0,CHES; pH10.0-11.0,CAPS.]

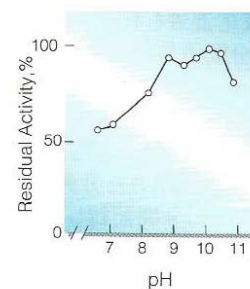


Fig.4. pH-Stability

[25°C, 25hr-treatment with 0.1M buffer solution;pH5.5-7.0,MES;pH8.5-10.0, Diethanolamine;pH10.5-11.0,CAPS. enzyme concentration:20U/ml]

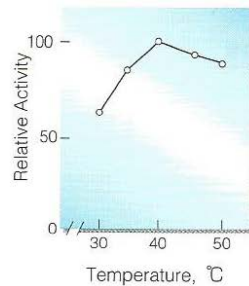


Fig.3. Temperature activity

[5 min-reaction in 1M Diethanolamine buffer,pH10.25.]

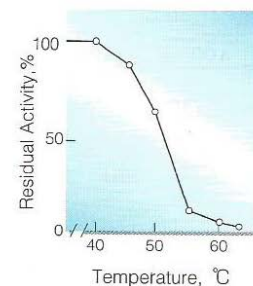


Fig.5. Thermal stability

[30min-treatment with 0.1M Diethanolamine buffer,pH9.5.enzyme concentration:20U/ml]