



Sisco
Research
Laboratories

Product Datasheet
and Specification

49936

Proteinase K ex. Tritirachium Album (Type A) for molecular biology, 30U/mg protein

Part B

CAS : 39450-01-6

Specifications

Appearance (Colour)	White
Appearance (Form)	Crystalline powder
Activity	min.30 units/mg protein
Protein content	min. 70%
DNase, RNase	Not detected
Unit Definition	One unit will hydrolyze casein to produce color equivalent to 1.0 micromole (181 µg) of tyrosine per minute at pH 7.5 at 37 °C (color by Folin & Ciocalteus reagent).
Enzyme solution for activity determination	Prepared in cold 10 mM sodium acetate buffer, pH 7.5.
Not for medicinal use	.

Other Information

Application

The Proteinase K offered by SRL is a very high quality product, commonly used in molecular biology & biochemistry applications to digest protein and remove contamination from preparations of nucleic acid. Addition of Proteinase K to nucleic acid preparations rapidly inactivates nucleases that might otherwise degrade the DNA or RNA during purification.

It is highly suited to this application since the enzyme is active in the presence of chemicals that denature proteins, such as SDS and urea, chelating agents such as EDTA, sulfhydryl reagents, as well as trypsin or chymotrypsin inhibitors.

Proteinase K is used for the destruction of proteins in cell lysates (tissue, cell culture cells) and for the release of nucleic acids, since it very effectively inactivates DNases and RNases.

Some examples for applications: Proteinase K is very useful in the isolation of highly native, undamaged DNAs or RNAs, since most microbial or mammalian DNases and RNases are rapidly inactivated by the enzyme, particularly in the presence of 0.5-1% SDS. Purification of genomic DNA from bacteria (miniprep): bacteria from a saturated liquid culture are lysed and proteins are removed by a digest with 100 ug/ml Proteinase K for 1 hr at 37 °C.

The enzyme's activity towards native proteins is stimulated by denaturants such as SDS. In contrast, when measured using peptide substrates, denaturants inhibit the enzyme. The reason for this result is that the denaturing agents unfold the protein substrates and make them more accessible to the protease.

General Information

Storage	-20 °C (Blue/Dry Ice)
Shelf Life	60 Months
IMDG Identification	Not Regulated for Transport (Non-Haz)
HSN Code	
1 Gms	35079099 (GST 18%)
10 Mg	35079099 (GST 18%)
100 Mg	35079099 (GST 18%)
25 Mg	35079099 (GST 18%)
500 Mg	35079099 (GST 18%)

Available Packages

25 Mg
100 Mg
500 Mg
1 Gms

Disclaimer

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