

DATA SHEET

**Proteinase K - Solution**

from *Tritirachium album*
 Endopeptidase K

Cat. Nº.	Amount
<input type="checkbox"/> DPK-102S	2 x 1 mL
<input type="checkbox"/> DPK-102L	10 x 1 mL

Unit Definition: One unit of Proteinase K hydrolyzes urea-denatured hemoglobin producing color equivalent of 1 mol tyrosine per 1 min at 37°C and pH 7.5 (Folin & Ciocalteu's method), 1 U = 1 mAnsonU.

Shipping:

Shipped on blue ice

Storage Conditions:

Store at -20 °C)

Shelf life:

12 months

CAS#:

39450-01-6

EC number:

254-457-8

Purity:

free of RNases, DNases and Exonucleases

Form:

Proteinase K solution in 10 mM Tris-HCl, 1 mM Ca(H₃C₂O₂)₂, 10 % (v/v) Glycerol, pH 7.8 (22°C)

Concentration: 20 mg/ml

Activity: > 600 mAnsonU/ml

Applications:

Digestion of proteins during DNA and RNA preparation.

Description:

Proteinase K is a serine protease that exhibits a very broad cleavage specificity. The protein with a molecular weight of 28.9 kDa cleaves peptide bonds adjacent to the carboxylic group of aliphatic and aromatic amino acids. Proteinase K is not inactivated by metal chelating reagents such as EDTA or detergents such as SDS and is active over a wide range of pH (4 - 12.5).

Proteinase K is a highly active and stable protease with low cutting specificity. The enzyme belongs to the group of subtilisine-related serine proteases and is strongly inhibited by PMSF. In presence of 0.5 - 1 % SDS Proteinase K inactivates DNases and RNases in eucaryotic and microbiological cell cultures. The use of Proteinase K during lysis of the cells allows the isolation of intact highly-molecular nucleic acids.

