# Proteinase K Solution

**Catalog Number** AM2546, AM2548  
**Pub. No.** 4393871  
**Rev.** C

<table>
<thead>
<tr>
<th>Contents</th>
<th>Quantity</th>
<th>Storage conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proteinase K, 20 mg/mL</td>
<td>AM2546: 1.25 mL</td>
<td>Store at –20°C. Do not store in a frost-free freezer. This product is guaranteed for 6 months from the date of receipt, if properly stored.</td>
</tr>
<tr>
<td></td>
<td>AM2548: 5 x 1.25 mL</td>
<td></td>
</tr>
</tbody>
</table>

**WARNING!** Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. Safety Data Sheets (SDSs) are available from [www.lifetechnologies.com/support](http://www.lifetechnologies.com/support).

**Product description**

Proteinase K is a nonspecific serine protease that is active in the presence of SDS or urea and over a wide range of pH, salt concentrations, and temperatures. For maximum convenience this product is supplied in 50% glycerol, in which it is stable for 6 months from date of receipt when stored at –20°C. This eliminates the nuisance of having to weigh out small amounts of lyophilized powder.

**Source:** Isolated from *Tritirachium album*.

**Unit definition:** One unit liberates 1 µmol of Folin-positive amino acids, measured as tyrosine, at 37°C, pH 7.5, using denatured bovine hemoglobin as the substrate.

**Storage buffer (not included):** 50 mM Tris, pH 8, 3 mM CaCl₂, 50% Glycerol.

**Using Proteinase K**

Proteinase K is used in the preparation of RNA and high molecular weight DNA suitable for pulsed field gel electrophoresis. It is also used to terminate reactions such as phosphatase or nuclease treatments, to degrade the enzyme and ensure its inactivity. Proteinase K treatment of samples with high protein concentrations facilitates subsequent phenol extractions.

Working concentrations of the enzyme range from 50 to 250 µg/mL. Typical extraction conditions for RNA are:

- 0.1 M NaCl
- 10 mM Tris pH 8.0
- 1 mM EDTA
- 0.5% SDS
- 200 µg/mL Proteinase K

Incubate at 50°C for 30–60 minutes.

The exact time of incubation and Proteinase K concentration depends on the amount of protein in the sample. For samples particularly high in nucleases, more Proteinase K should be added.

**Limited product warranty**

Life Technologies Corporation and/or its affiliate(s) warrant their products as set forth in the Life Technologies’ General Terms and Conditions of Sale found on Life Technologies’ website at [www.lifetechnologies.com/termsandconditions](http://www.lifetechnologies.com/termsandconditions). If you have any questions, please contact Life Technologies at [www.lifetechnologies.com/support](http://www.lifetechnologies.com/support).