

## Product Information

### Protease from *Bacillus licheniformis*

Catalog Number **P5459**  
Storage Temperature 2–8 °C

CAS RN 9014-01-1  
EC 3.4.21.62  
Synonym: Subtilisin A

#### Product Description

This enzyme optimally hydrolyzes gelatin over the range of pH 8.0 to 10 at 50 °C, and remains active over the range of pH 6.0 to 10.0 at 50 °C. It has optimal activity at 60 °C and effectively hydrolyzes gelatin at temperatures up to 70 °C. For general usage, maintain temperature at 45–50 °C at pH 8–10. Sodium bicarbonate may be used to adjust and maintain pH.<sup>1</sup>

This protease from *Bacillus licheniformis* is not specific in activity. Commercial uses are in laundry detergent formulations and recovery of silver from photographic emulsions. This product is assayed as a general protease, using casein as a substrate.<sup>2</sup>

This product is supplied as 50% glycerol solution.

Specific activity: ≥7 units/mg protein (biuret)

Unit definition: One unit will hydrolyze casein to produce color equivalent to 1.0 μmole of tyrosine per minute at pH 7.5 at 37 °C. (Color by Folin-Ciocalteu reagent)

#### Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

#### Preparation Instructions

This product gives a clear solution when diluted with 0.85% NaCl,<sup>2</sup> and is completely miscible with water.<sup>1</sup> It is recommended to prepare and use diluted solutions as needed, rather than storing at 2–8 °C.

#### Storage/Stability

Stored the product at 2–8 °C. It is expected to remain active for at least two years.

#### References

1. Supplier information
2. Sigma quality control data

SBC, AI, MAM 05/19-1