

BioStab Biomolecule Stabilizer



Product Information

Order Number

59975-1

59975-2

Description

BioStab Biomolecule Stabilizer, 10 ml

Store at 4 -8 °C

BioStab Biomolecule Stabilizer, 50 ml

Store at 4 -8 °C

Introduction

The BioStab Biomolecule Stabilizer contains a proprietary mixture of protein protectants, including extremolytes, which are used by bacteria since million of years to protect their proteins. The BioStab Biomolecule Stabilizer is a ready-to-use solution, which protects proteins, nucleic acids, as well as membranes and whole cells against influences like thermal stress, proteolysis, and alterations in pH or salt concentration and thereby improves the stability of the molecules, membranes and cells.

Recommended Usage

BioStab Biomolecule Stabilizer is supplied as a 5-fold stock solution and is ready-to-use for your custom dilution. From results obtained with various proteins, enzymes and other biomolecules, optimal results can be obtained with a final concentration between 0.1-fold and 2-fold BioStab Biomolecule Stabilizer. The stabilizer can be easily combined with other products of the BioStab series.

Product safety and handling

This product is considered non-hazardous as defined by the Hazard Communication Standard. Avoid contact with skin and eyes. In case of contact or spillage, clean with copious amounts of water.

Storage, Shipment and Stability

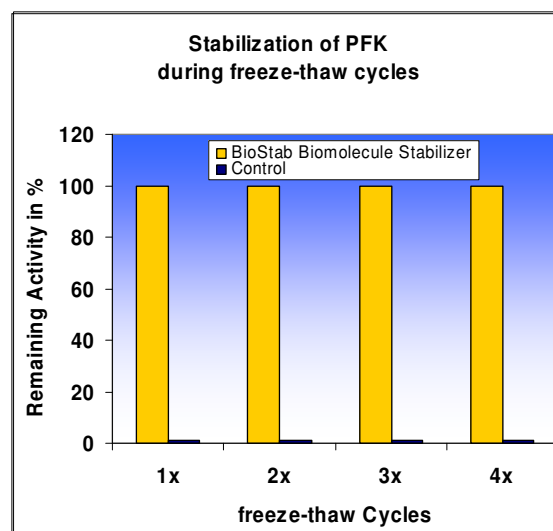
Store at 2 to 8°C.

This product has been filtered through a 0.22 µm filter.

BioStab Biomolecule Stabilizer is a solution in sterile, bidestillated water and is DNase-, RNase and Protease-free and contains no proteins and preservatives. BioStab Biomolecule Stabilizer has a shelf life of 12 months.

Examples:

Protection of proteins, enzymes and bio molecules during freeze-thaw cycles:



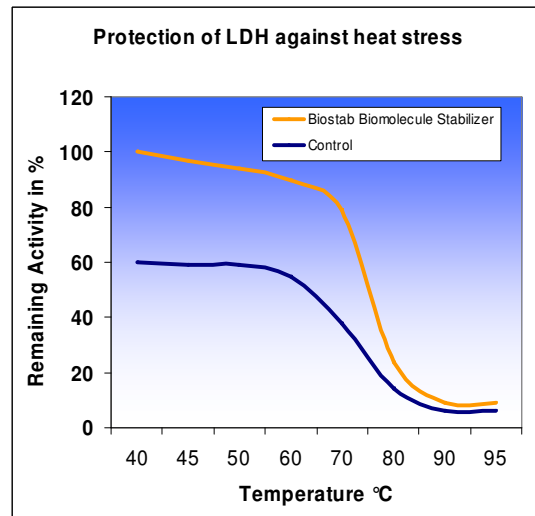
Many enzymes, such as PFK, retain approximately 10% activity after two freeze-thaw cycles. The addition of conventional „freezing additives“, such as betain, prolin, trehalose, saccharose and glycerol, reach a maximum activity of 60% after four cycles.

Using BioStab Biomolecule Stabilizer, enzyme activity does not decrease below 90 % after four freeze-thaw cycles. In some cases, the enzyme activity even increases up to 105 %. Additionally, BioStab Biomolecule Stabilizer does not change the viscosity of the solution.

Protection of proteins, enzymes and bio molecules during drying:

After freeze-drying in BioStab Biomolecule stabilizer, the remaining activity retains 80%, whereas other additives like trehalose and glycerol only achieve remaining activities of 2-40% (tested on LDH und PFK).

Protection of proteins, enzymes and bio molecules during heat stress:



Dilution in BioStab Biomolecule Stabilizer allows nearly 100% activities of enzymes, like LDH, after 10 minutes of heat stress at 55°C. Other protein stabilizers only retain enzyme activities of 60%, even at temperatures of 40°C. Additionally, the activity decreases more dramatically with rising temperatures.

This product is for research only and is not intended for use in human or clinical diagnosis.