	<b>Datasheet for General Protein Stabilizers</b>  Name of the Products: SeramunStab <sup>®</sup> STpur SeramunStab <sup>®</sup> STB SeramunStab <sup>®</sup> STD	Art.-No.: ST-310-STpur ST-320-STB ST-390-STD  Doc.:DB_E_STprot_v01.docx version: 01 valid from: 2014-07-21  page 1 of 2
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## 1. Effective Components

These Stabilizer solutions are based on aqueous buffer systems with bovine serum albumin and further protein stabilizing additives, to stabilize distinct kinds of biomolecules.

SeramunStab<sup>®</sup>STpur is a general applicable Stabilizer, e.g. for antibodies of the IgG class or complete serum solutions.

SeramunStab<sup>®</sup>STB contains substances with strong inner molecular charge differences, suitable for small biomolecules with strong charged sections, amongst others hormones.

SeramunStab<sup>®</sup>STD is characterized by low concentrations of chaotropic ions and therefore suitable for very sensitive proteins, like antibodies of the IgM-class or toxins.

The solutions contain biocides for protection from microbiological spoilage. The biocides are dangerous for water organisms (see safety data sheet). By use in accordance with attended purpose, no danger for laboratory staff and environment is expected.

## 2. Principle of Function

For stabilization of proteins or other biomolecules the solutions provide optimum ambient conditions regarding pH value, ionic strength, hydrophilic-hydrophobic as well as ionic interactions, needed to safe the conformation and function. The different solutions favor different types of molecular interactions corresponding to varying classes of biomolecules.

## 3. Instructions for Storage, Transport and Filling

SeramunStab<sup>®</sup>STpur, SeramunStab<sup>®</sup>STB and SeramunStab<sup>®</sup>STD should be stored at 2 – 8 °C in tightly closed vessels. The shelf life is 36 months in the unopened original package from the date of production.

It is possible to transport the solution at ambient temperature. Temperatures exceeding 30°C should be avoided. The transport should take less than one week.

Any filling or decanting into other vessels has to be done under low-germ conditions into clean vessels.

Frozen solutions have to be mixed thoroughly after thawing and can be used without any restriction afterwards.


Solutions showing turbidity should not be used, since this might be a sign of contamination.

## 4. General Instructions for Use

Only qualified staff, who are familiar with the production of immunological tests, is permitted to handle SeramunStab<sup>®</sup>STpur, SeramunStab<sup>®</sup>STB and SeramunStab<sup>®</sup>STD.

The solutions contain bovine serum albumin. This may result in slight shifts of the product properties. Therefore it is recommend to check every new lot for its application in the planned test systems. A reservation of distinct lots is possible.

The stabilizer solutions SeramunStab<sup>®</sup>STpur, SeramunStab<sup>®</sup>STB and SeramunStab<sup>®</sup>STD are applied undiluted. The biomolecules should be diluted stepwise in the stabilizer solution, depending on the initial concentration and the planned final concentration. Depending on the requirements of the test system concentrations between 0.5 ng/ml and more than 5 µg/ml are suitable.

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Standard- or control solutions on the basis of SeramunStab®STpur, SeramunStab®STB and SeramunStab®STD are suitable for ELISA, micro arrays and membrane based assays.

To suppress undesirable effects it is possible to add e.g. HAMA binder and / or further species specific proteins to the solutions.

For identification purposes it is possible to add dyes. In case of a request, please contact us.

### Special details / Limitations

#### SeramunStab®STpur

Under the influence of elevated temperatures the solution develops a darker colour. The stabilizing effect is not influenced.

This solution stabilizes HRP conjugates as well.

#### SeramunStab®STB

Freshly prepared solutions are slightly opalescent but will clear up within some months. The stabilization effect is not influenced by this process.

This solution stabilizes also HRP conjugates very well, but shows a strong initial suppression of signals.

#### SeramunStab®STD

In connection with Ca-binding proteins undesirable effects are possible.

HRP activity will be adversely affected by this solution.

## 5. Literature

Maria M. Anderson: Protein stabilization. Some methods and mechanisms, Doctoral Dissertation Lund University 1999

Majorie Smith et.al.: Stabilised Antibodies, International Patent Application WO 93/08837

K. Lippert, E.A. Galinski: Enzyme stabilization by ectoine-type compatible solutes: protection against heating, freezing and drying, Appl. Microbiol. Biotech. 37, 61-65 (1994)