

Data Sheet



LacBuster™-S

Cat. No.	Formulation	Sales Unit	Activity / vial
EB006.4	freeze dried powder	1 vial	> 50'000 IU βI > 5'000 IU βII

Specifications

LacBuster™-S is a β-lactamase formulation with a broad substrate range against β-lactam antibiotics including carbapenems, cephalosporins up to 5th generation, and penicillins.

LacBuster™-S is available as a freeze-dried product containing buffer salts.

Unit definition

One International unit of Penicillinase activity (IU β-I) will hydrolyze 1.0 μmole benzylpenicillin per minute at pH 7.0 and 25°C. One IU β-I corresponds to 600 Levy Units or 100.000 Kersey Units, respectively.

One International unit of Cephalosporinase activity (IU β-II) will hydrolyze 1.0 μmole cephalosporin C per minute at pH 7.0 and 25°C.

Applications

LacBuster™-S can be applied for sterility testing of β-lactam antibiotics by membrane filtration according to US and European Pharmacopeia methods. It can be easily incorporated into existing standard operating procedures by addition of the reconstituted sterile-filtered enzyme solution to all buffers and media.

To validate complete inactivation of the β-lactam a challenge test (using less than 100 colony-forming units of *Staphylococcus aureus* ATCC 6538 or *Bacillus subtilis* ATCC 6633) with an appropriate quantity of enzyme has to be performed under the customer-specific settings. Please refer to our application specialists for further advice.

Further applications include environmental monitoring of manufacturing areas and sterility testing of blood cultures.

Recommendations for use

For reconstitution, we recommend dissolving the content of one vial EB006.4 in 40 mL of deionized, purified water. After reconstitution, filter-sterilize through a 0.2 μm low-protein binding membrane.

For preparation of agar plates, **LacBuster™-S** should be added to the medium at a temperature of ≤ 55°C.

Sterility

LacBuster™-S EB006.4 is neither pre-sterilized nor irradiated and should be filter-sterilized after reconstitution. An irradiated formulation is available as **LacBuster™-S** EB006.1 or EB006.2.

Storage/Stability

LacBuster™-S is stable in unopened vials for one year from the date of manufacturing at 2-8°C. After reconstitution **LacBuster™-S** is stable for at least two months at 2-8°C.

Substrate Range

LacBuster™-S has been demonstrated to inactivate following β-lactam antibiotics efficiently:

- **Cephalosporins:** Cefaclor, Cefadroxil, Cefazolin, Cefepime, Cefixime, Cefotaxime, Cefoxitin, Cefpodoxime, Ceftazidime, Ceftibuten, Ceftriaxon, Cefuroxime, Cephalexin
- **Carbapenems:** Doripenem, Ertapenem, Imipenem, Meropenem
- **Penicillins:** Amoxicillin, Ampicillin, Benzylpenicillin, Oxacillin, Piperacillin, Ticarcillin

For *in vitro* use only.