

# Lactamator™



## THE PRODUCT

**LACTAMATOR™** is an innovative enzyme-based product developed by CPC Biotech specifically designed for the inactivation of a wide range of beta-lactam antibiotics. **LACTAMATOR™** efficiently inactivates penicillins, cephalosporins of first, second, third, fourth, fifth generation, penems and monobactams.

## FORMULATION AND PACK SIZE

Freeze dried **LACTAMATOR™** is available in the following pack size:

- cod. LCT-5: pack size of 10 vials each of which contains > 50 IU of cephalosporinase activity/vial and > 500 IU of penicillinase activity/vial
- cod. LCT-20: pack size of 1 vial containing > 2,000 IU of cephalosporinase activity/vial and > 20,000 IU of penicillinase activity/vial
- cod. LCT-BULK (on demand)

### Sterile freeze-dried formulation:

- cod. LCT-5 IR: pack size of 10 vials each of which contains > 50 IU of cephalosporinase activity/vial and > 500 IU of penicillinase activity/vial

The product is sterile by  $\beta$ -irradiation.

Freeze dried and sterile freeze dried **LACTAMATOR™** are also available as enzymatic products having only cephalosporinase activity (product on demand).

**Sterile liquid ready to use LACTAMATOR™** is available in the following pack size:

- cod. LCT-LQS10: pack of 5 x 10 ml vials each of which contains > 100 IU of cephalosporinase activity/vial and > 1,000 IU of penicillinase activity/vial

1 IU is defined as the amount of enzyme needed to hydrolyze 1  $\mu$ mole of Penicillin G (Penicillinase) or 1  $\mu$ mole of Cephalosporin C (Cephalosporinase) per minute at 25°C and pH 7.0.

1 IU of Penicillinase corresponds to 600 Levy Units.

Product is  $\gamma$ -irradiated.

## APPLICATION

**LACTAMATOR™** is a product specifically designed for the inactivation of a broad range of beta-lactam antibiotics, thus find its application in beta-lactams sterility testing (either environmental or antibiotics sterility testing).

**LACTAMATOR™** can be used for the inactivation of beta-lactams from blood or tissue sample prior to routine microbiological examination. Due to its very broad specificity range **LACTAMATOR™** can also be used in the assessment of the susceptibility of new beta-lactams antibiotics to inactivation by ESB lactamases.



## USAGE

### Freeze dried formulation

**cod. LCT-5/LCT-5 IR:** reconstitute each vial with 5 ml of purified water obtaining a solution having > 10 IU/ml of cephalosporinase activity and > 100 IU of penicillinase activity.

**cod. LCT-20:** reconstitute the vial with 20 ml of purified water obtaining a solution having > 100 IU/ml of cephalosporinase activity and > 1.000 IU/ml of penicillinase activity.

After reconstitution sterile filter the solution using a suitable device. Add an appropriate amount of enzyme solution to the test sample. The amount of **LACTAMATOR™** to be added to the test sample should be determined and set-up case by case depending on the application, concentration of antibiotic that should be inactivated, and depending on the specific beta-lactam that should be inactivated.

### Sterile liquid ready to use formulation (cod. LCT-LQS10)

Sterile liquid **LACTAMATOR™** is an optimized ready to use solution that can be directly added to the test samples.

The amount of liquid sterile **LACTAMATOR™** to be added to the test sample should be determined and set-up case by case depending on the application, concentration of antibiotic that should be inactivated, and depending on the specific beta-lactam that should be inactivated.

## STABILITY OF REAGENTS

### Freeze dried formulation

Freeze dried **LACTAMATOR™** has a stability of 36 months from manufacturing date. LCT-5 IR has a stability of 48 months from manufacturing date. After reconstitution and sterile filtration, the solution can be stored at +2°C/+8°C for at least three months without losing activity.

### Sterile liquid ready to use formulation (cod. LCT-LQS10)

Sterile liquid **LACTAMATOR™** has a stability of 48 months from manufacturing date. The product should be stored at +2°C/+8°C

## ADDITIONAL INFORMATION

**LACTAMATOR™** DOES NOT CONTAIN ANIMAL DERIVATIVES and it's certified as a TSE/BSE free product.



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