

Cefoxitin MRSA Supplement

Cat. 6069

For the detection of methicillin resistant *Staphylococcus aureus* from clinical samples.

Practical information

Applications	Categories
Detection	Staphylococcus

Industry: Clinical



Principles and uses

Methicillin resistant *Staphylococcus aureus*, MRSA, are of particular interest at an international level due to its virulence and resistance to multiple antibiotics. The antimicrobial resistance is a serious threat to public health as it is now regarded as a major hospital acquired disease worldwide. The important changes observed in the epidemiological and microbiological characteristics of the infections caused by *Staphylococcus aureus* are the reason for the increment and prevalence of methicillin-resistant *Staphylococcus aureus* nosocomial (associated to hospitalized patients) and the proliferation of methicillin-resistant *Staphylococcus aureus* acquired by the community. The MRSA continues being a serious problem in many healthcare centres; more than 50% of the *Staphylococcus aureus* obtained are from Intensive Care Units (ICU) and close to 40% are from hospital patients. Effective, rapid laboratory diagnosis and susceptibility testing is critical in treating, managing and preventing MRSA infections.

Cefoxitin inhibits the growth of *Staphylococcus aureus* sensitive to methicillin. Cefamycins (cefoxitin) are β -lactam antibiotics that induce the production of PBP2a, a transpeptidase responsible for methicillin resistance.

Formula per vial

Cefoxitin (mg)	2
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Preparation

Aseptically reconstitute 1 vial with 5 ml of warm sterile distilled water. Mix gently until complete dissolution. Aseptically add to 500 ml of MRSA Chromogenic Agar Base (Cat. 1423) or MRSA Chromogenic Agar Base Modified (Cat. 1498), autoclaved and cooled to 50 °C. Mix well and distribute into sterile containers.

When the Cefoxitin MRSA Supplement is required to be added to another media like MRSA Chromogenic Agar Base Modified (Cat. 1498), refer to the specific instructions of the medium.

Instructions for use

- For clinical diagnosis, use any type of clinical sample.
- Inoculate on the surface. Parallel striae with the handle or swab.
 - Incubate plates aerobically at 35 ± 2 °C for 18-24 hours.
 - Reading and interpretation of the results.

Quality control

Solubility	Appearance	Color of the dehydrated medium	Color of the prepared medium	Final pH (25°C)
w/o rests	Lyophilized tablet	N/A	Transparent	N/A

Microbiological test

Incubation conditions: (35 ± 2 °C / 18-24 h).

Microrganisms	Specification	Characteristic reaction
Escherichia coli ATCC 25922	Inhibited growth	
Staphylococcus aureus ATCC 25923	Inhibited growth	
Staphylococcus aureus ATCC 43300	Good growth	Colony color Blue

Storage

Temp. Min.:2 °C
Temp. Max.:8 °C

Bibliography

Hutchison, M.J., Edwards, G.F.S., Morrison, D., Evaluation of chromogenic MRSA Reference Laboratory presented at the 2005 Institute of BioMedical.