

Specification

Sterile selective supplement used for the detection of Methicillin resistant *Staphylococcus aureus* from clinical samples

Presentation

10 Freeze dried vial
Vial
with: 3 ± 0.1 g

Packaging Details

22±0.25 x 55±0.5 mm glass vials, tag labelled, White plastic cap - 10 vials per box.

Shelf Life

36 months

Storage

2-8 °C

Composition

Composition (mg/vial)

Cefoxitin..... 2 mg
Excipient (sufficient amount)

NOTE: Each vial is sufficient to supplement 500 ml MRSA Agar.

Reconstitute the original freeze-dried vial by adding

Sterile Distilled Water..... 5 ml

Description /Technique

Description:

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 B-lactam antibiotics that induce the production of PBP2a, a transpeptidase responsible for methicillin resistance.

Technique:

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

Physical/Chemical control

Color : White-Gray

pH: at 25°C

Microbiological control

Reconstitute 1 vial as indicated in COMPOSITION; shake and dissolve completely

Add 1 vial to 500 ml of medium Mueller Hinton A. + 4% NaCl

Aerobiosis. Incubation at 35°C ± 2 °C, reading at 24-48 hours

Microorganism

Stph. aureus ATCC® 25923, WDCM 00034

Stph. aureus ATCC® 43300, WDCM 00211 (MRSA)

Escherichia coli ATCC® 25922, WDCM 00013

Growth

Inhibited

Good -Blue colonies

Inhibited

Sterility Control

Incubation 48 hours at 30-35 °C and 48 hours at 20-25 °C: NO GROWTH.

Check at 7 days after incubation in same conditions.

Bibliography

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