

MRSA Chromogenic Agar Base

Cat. 1423

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

Practical information

Applications	Categories
Detection	Staphylococcus

Industry: Clinical



Principles and uses

MRSA Chromogenic Agar Base is a chromogenic, selective and differential medium for detection of methicillin resistant *Staphylococcus aureus*.

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.

This chromogenic media has been designed and is adequate for the screening of *Staphylococcus aureus* resistant to methicillin. The alpha-glucosidase produced by *Staphylococcus aureus* cleaves the chromogenic substrate and gives a blue color to the *Staphylococcus aureus* colony. The cefoxitin inhibits the growth of *Staphylococcus aureus* sensitive to methicillin.

Formula in g/L

Bacteriological agar	12,5	Peptone mixture	11
Growth factors	78	Chromogenic Substrate	1,9

Preparation

Suspend 51,7 grams of the medium in 500 ml of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. AVOID OVERHEATING. Sterilize in autoclave at 121 °C for 15 minutes. Cool to 45-50 °C and aseptically add one vial of Cefoxitin Supplement (Cat. 6069) reconstituted in 5 ml of warm sterile distilled water. Homogenize gently and dispense into Petri dishes.

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 24-48 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	Fine powder	Grey straw	Amber, slightly opalescent	7,2±0,2

Microbiological test

Incubation conditions: (35±2 °C / 24-48 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.