

Hicrome™ Rapid MRSA Agar Plate

MP1974

Intended Use:

Recommended for rapid isolation and identification of Methicillin Resistant *Staphylococcus aureus* (MRSA) from clinical specimens.

Composition**

Ingredients	g / L
Special peptone	20.000
Casitose ▲	20.000
Sodium chloride	8.500
Carbohydrate	14.000
Phenol red	0.025
Chromogenic mix	6.500
Amino-Vitamin mix	1.200
Agar	15.000
ACC Selective Supplement (FD319)	
Cefoxitin	10.000 mg
Colistin	10.000 mg
Amphotericin B	10.000 mg
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

▲ - Equivalent to Casein peptone

Directions

Either streak, inoculate or surface spread the test inoculum (50-100 CFU) aseptically on the plate.

Principle And Interpretation

MRSA is a resistant variation of the common bacterium *Staphylococcus aureus*. It is an invasive pathogen that can cause disease in almost any tissue or organ in the human body, primarily in compromised individuals (1). *Staphylococcal* infections were earlier treated using Penicillin. But over the years resistance to this drug developed. Methicillin was the next drug of choice. While methicillin is very effective in treating most *Staphylococcus* infections some strains have developed resistance to methicillin and can no longer be killed by this antibiotic. These resistant bacteria are called Methicillin Resistant *Staphylococcus aureus* (MRSA) (2). Patients with breaks in their skin due to wound, indwelling catheters or burns are those with certain risk of developing MRSA infection (3).

Special peptone, Casitose and amino-vitamin mix provides essential nutrients for growth. Carbohydrate is the source of carbon and energy. Phenol red is the pH indicator. The chromogenic mixture incorporated in the medium is specifically cleaved by *Staphylococcus aureus* (MRSA) to give greenish yellow coloured colonies. Sodium chloride in the medium helps to maintain the osmotic equilibrium of the medium. High concentration of sodium chloride also helps in inhibiting the accompanying microflora. Agar acts as solidifying agent.

Type of specimen

Clinical samples - Tissue samples, wound swab, nasal swab, skin lesions, etc.

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (4,5).

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic Use only. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Certain strains of MRSA which are intermediate may show poor growth. Further incubation upto 48 hours should be carried out.
2. Further sensitivity can be carried out to ascertain the extent of resistance.
3. Other methicillin resistant *Staphylococcus* species may grow. Further biochemical tests must be carried out to differentiate between resistant strains.
4. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium
5. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Sterile HiCrome™ Rapid MRSA Agar in 90mm disposable plates with smooth surface and absence of black particles/ cracks/bubbles

Colour of medium

Reddish orange coloured medium

Quantity of medium

25ml of medium in disposable plate

pH

7.20- 7.60

Sterility Check

Passes release criteria

Cultural Response

Cultural characteristics observed after an incubation at 30-35°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of Colony
<i>Staphylococcus aureus</i> , MRSA ATCC 43300	50-100	luxuriant	≥50%	greenish yellow (Note: Green colour may develop after 48 hours)
<i>Staphylococcus epidermidis</i> , MRSE	50-100	luxuriant	≥50%	blue
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> ATCC 25923 (00034*)	≥10 ³	inhibited	0%	
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> ATCC 6538 (00032*)	≥10 ³	inhibited	0%	
<i>Escherichia coli</i> ATCC 25922 (00013*)	≥10 ³	inhibited	0%	
<i>Candida albicans</i> ATCC 10231 (00054*)	≥10 ³	inhibited	0%	

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

On receipt store between 2-8°C. Use before expiry date on the label. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (4,5).

Reference

1. Dr. Alan Johnson, methicillin resistant *Staphylococcus aureus* (MRSA) infection. The Support group for MSRA sufferers and Dependents, Aug 1st , 2005.
2. DWorkin M et. al 2006. The Prokaryotes (a Handbook on the Biology of Bacteria) 3rd ed, Vol. 2, page 345.
3. Methicillin Resistant *Staphylococcus aureus* Copyright © 1997-2005 Canadian Centre for Occupational Health and Safety, Sept 19th, 2005.
4. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
5. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

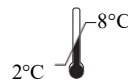
Revision : 03/2024



HiMedia Laboratories Pvt. Limited,
Plot No.C-40, Road No.21Y,
MIDC, Wagle Industrial Area,
Thane (W) -400604, MS, India



IVD *In vitro* diagnostic
medical device



Storage temperature



CEpartner4U, Esdoornlaan 13,
3951DB Maarn, NL
www.cepartner4u.eu



CE Marking



**Do not use if
package is damaged**

Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory, diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.