



Ready Prepared Media

Technical Information

MiCrome Staph Agar Plate, Modified

Product Code: PM 2837

Application: Recommended as a selective medium recommended for the isolation and enumeration of *Staphylococcus aureus*

Composition**

Ingredients	Gms / Litre
Peptone special	23.000
Sodium pyruvate	4.000
Sodium chloride	40.000
Lithium chloride	5.000
Chromogenic mixture	5.300
Agar	15.000
Polymyxin B sulphate	50000Unit
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Staphylococci are widespread in nature, though they are mainly found living on the skin, skin glands and mucous membranes of mammals and birds. Humans and animals are the primary source of this organism. Because of its widespread nature it is easily transferred to food and a cause of food poisoning if not handled properly (1). The coagulase positive species *S. aureus* is well documented as a human opportunistic pathogen. *Staphylococcus* species are a major cause of food poisoning and produces a wide variety of enterotoxins, thus causing various types of disease symptoms. The ability to clot plasma continues to be the most widely used and accepted criterion for the identification of pathogenic staphylococci associated with acute infections (2).

This medium is a selective chromogenic medium recommended for the isolation and enumeration of coagulase positive staphylococci in foods within 24 hours. This medium has an advantage over the traditional media which requires 48 hours. Peptones in the medium supplies the essential nitrogenous compounds required for the growth. The chromogenic mixture incorporated in the medium is specifically cleaved by *Staphylococcus aureus* to give bluish green coloured colonies which are clearly visible against the opaque background. Sodium pyruvate enhances the growth of *Staphylococcus* species. 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. Lithium chloride inhibits most of the contaminating microflora. Addition of PolyB Selective Supplement (MS2003) helps to restrict growth of gram-negative bacteria such as *Escherichia coli* and *Pseudomonas aeruginosa*.

Type of specimen

Clinical samples - Skin lesions, wound swab, pus, etc.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (3,4).

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



Ready Prepared Media

Warning and Precautions

In Vitro diagnostic Use. For professional use only. Read the label before opening the pack. 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. Due to variable nutritional requirements, some strains may show poor growth on this medium.
2. Slight colour variation may be observed depending upon the utilization of the substrate by the organism.
3. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium
4. 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.

Directions

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

Quality Control

Appearance

Sterile MiCrome Candida Differential Agar in 90 mm disposable plates with smooth surface and absence of black particles/cracks/bubbles.

Colour of medium

Off white coloured opaque gel forms in Petri plates

Quantity of medium

25 ml of medium in 90 mm disposable plates.

pH

7.00 - 7.40

Sterility Check

Passes release criteria

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth	Observed Lot value(CFU)	Recovery	Colour of Colony
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> ATCC 25923 (00034*)	50-100	Luxuriant	25-100	>=50%	Greenish blue to blue
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> ATCC 6538 (00032*)	50-100	Luxuriant	25-100	>=50%	Greenish blue to blue
<i>Staphylococcus saprophyticus</i> ATCC 15305(00159*)	50-100	Luxuriant	25-100	>=50%	Greenish blue to blue
<i>Bacillus cereus</i> ATCC 10876	50-100	non-poor	0-10	<=10 %	
<i>Staphylococcus epidermidis</i> ATCC 12228 (00036*)	50-100	non-poor	0-10	<=10 %	
<i>Enterococcus faecalis</i> ATCC29212 (00087*)	50-100	non-poor	0-10	<=10 %	

