90923 MeReSa *ChromoSelect* Agar Base
(Methicillin Resistant Staphylococcus aureus *ChromoSelect* Agar Base; MRSA *ChromoSelect* Agar)

MeReSa *ChromoSelect* Agar is recommended for the isolation and selective identification of Methicillin Resistant *Staphylococcus aureus* (MRSA) from clinical isolates.

Composition:

Ingredients	Grams/Litre
Casein enzymic hydrolysate	13.0
Yeast extract	2.5
Beef extract	2.5
Sodium pyruvate	5.0
Sodium chloride	40.0
Chromogenic mixture	5.3
Agar	15.0
Final pH 7.0 +/- 0.2 at 25°C	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.

Appearance: Faintly beige to light yellow coloured, homogeneous, free flowing powder.
Gelling: Firm
Color and Clarity: Light brownish-yellow coloured, opaque gel forms in petri plates.

Directions:
Suspend 41.65 g in 500 ml distilled water. Heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Cool to 45-50°C and aseptically add the rehydrated contents of 1 vial of MRSA Selective Supplement (Cat. No. 51387). Mix well and pour into sterile petri plates.

Principle and Interpretation:
Staphylococcus aureus 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 wounds, indwelling catheters or burns are those with certain risk
of developing MRSA infection (3). Spread of MRSA infections can be controlled to a great extent by maintaining personal hygiene after interaction with an MRSA infected person (2).
Casein enzymic hydroylsate, beef extract and yeast extract provide the essential nutrients along with carbonaceous, nitrogenous and Vitamin B complex nutrients. The proprietary chromogenic mixture incorporated in the medium is specifically cleaved by *Staphylococcus aureus* to give bluish green coloured colonies. 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. The medium is made selective for MRSA by the addition of MeReSa Selective Supplement (contains methicillin).

Cultural characteristics after 18-24 hours at 35-37°C.

Organisms (ATCC)	Growth	Color of Colony	Growth*	Color of Colony*
Staph. aureus (25923)	+++	bluish-green	-	-
Staph. aureus (MRSA) (43300)	+++	bluish-green	+++	bluish-green
Staph. epidermidis (12228)	+++	bluish-green	-	-
E. coli (25922)	+	purple	-	-
E. faecalis (29212)	-/+	light green	-	-
Staph. aureus (6538)	+++	bluish-green	-	-
Staph. xylosus (29971)	+++	metallic blue	-	-

Key : * = with added MeReSa Selective Supplement

References:

1. M. Dworkin et. Al, The Prokaryotes (a Handbook on the Biology of Bacteria)3rd ed, Vol. 2, page 345 (2006)
2. Methicillin Resistant Staphylococcus aureus Copyright © 1997-2005 Canadian Centre for Occupational Health and Safety, Sept 19th (2005)
3. Dr. Alan Johnson, methicillin resistant Staphylococcus aureus (MRSA) infection. The Support group for MSRA sufferers and Dependents, Aug 1st (2005)

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.