

30524 Staph ChromoSelect Agar Base, Modified

Staph *ChromoSelect* Agar Base, Modified is a selective medium recommended for the isolation and enumeration of *Staphylococcus aureus*.

Composition:

Ingredients	Grams/Litre
Peptone special	23.0
Sodium pyruvate	4.0
Sodium chloride	40.0
Lithium chloride	5.0
Chromogenic mixture	5.3
Agar	15.0
Final pH 7.2 ± 0.2 at 25°C	

Store at 2-8°C and the prepared medium at 2-8°C. Use before expiry date on the label.

Appearance: Off white to light yellow, homogeneous, free flowing powder.
 Gelling: Firm
 Color and Clarity: Off white, opaque gel form in Petri plates.

Directions:

Suspend 46.15 grams in 500 ml distilled water. Heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Cool to 45-50°C and aseptically add rehydrated contents of 1 vial of Polymyxin B Selective supplement (Cat. No. P9602). Mix well and pour into sterile Petri plates.

Warning: Lithium Chloride is harmful. Avoid all bodily contact and inhalation of vapours. On contact with skin wash with plenty of water immediately.

Principle and 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 *St. 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. Peptone special provides the essential nitrogenous compounds and other essential growth nutrients 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 is for the better recovery and enhanced growth of staphylococci. 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 Polymyxin B Sulphate helps to restrict growth of gram-negative bacteria such as *Escherichia coli* and *Pseudomonas aeruginosa*.

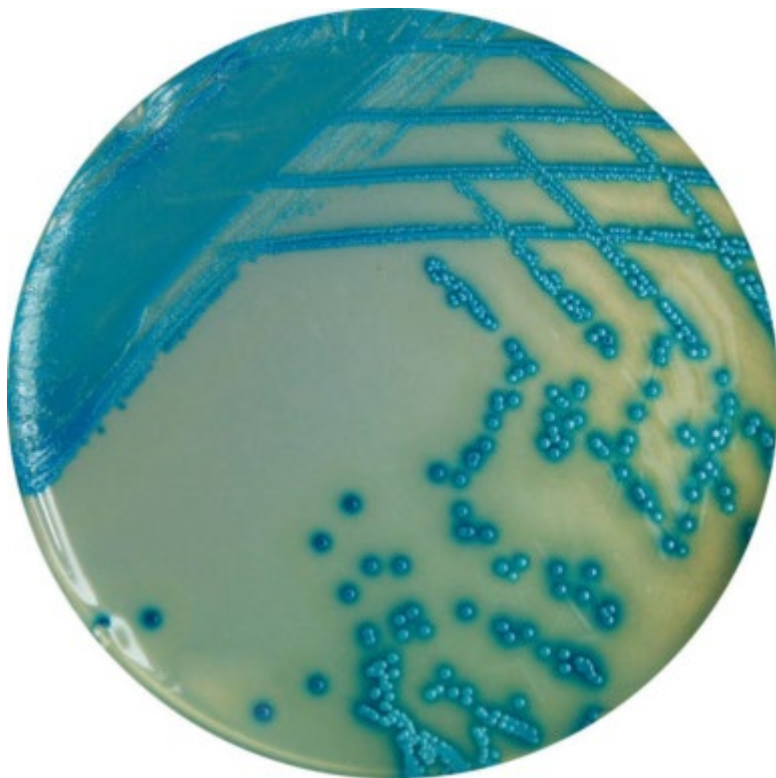


Cultural characteristics with Polymyxin B Selective supplement after 24 hours at 35-37°C.

Organisms (ATCC)	Inoculum [CFU]	Growth	Recovery [%]	Colony appearance
<i>Staphylococcus aureus</i> (25923)	50-100	+++	≥50	blue colonies
<i>Staphylococcus aureus</i> (6538)	50-100	+++	≥50	blue colonies
<i>Staphylococcus saprophyticus</i> (15305)	50-100	+++	≥50	blue colonies
<i>Bacillus cereus</i> (10876)	50-100	-/+	≤10	-
<i>Staphylococcus epidermidis</i> (29212)	50-100	-/+	≤10	-
<i>Enterococcus faecalis</i> (29212)	50-100	-/+	≤10	-
<i>Escherichia coli</i> (25922)	≥10 ³	-	0	-

References:

1. P.R. Murray, J.H. Baron, M.A. Pfaller, J.H. Tenover, R.H. Tenover, (Ed.), Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C. (2003)
2. V. F. Lachica, K.F. Weiss, R.H. Deibel, Appl. Microbiol., 18, 126-27 (1969)



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.

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