

HiCrome Klebsiella Selective Agar Base

M1573

HiCrome Klebsiella Selective Agar Base is used for the selective isolation and easy detection of *Klebsiella* species from water and other sources. This medium can also be used in membrane filtration procedure.

Composition**

Ingredients	Gms / Litre
Peptone, special	12.000
Yeast extract	7.000
Sodium chloride	5.000
Bile salts mixture	1.500
Sodium lauryl sulphate (SLS)	0.100
Chromogenic mixture	0.200
Agar	15.000
Final pH (at 25°C)	7.1±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 20.4 grams in 500 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 50°C and aseptically add rehydrated contents of one vial of Klebsiella Selective Supplement (FD225). Mix well and pour into sterile Petri plates.

Principle And Interpretation

HiCrome Klebsiella Selective Agar Base is recommended for isolation and enumeration of *Klebsiella* species based on chromogenic differentiation. *Klebsiella pneumoniae* strains are widely distributed in the environment and contribute to biochemical and geochemical process (1). *K.pneumoniae* causes severe often fatal pneumonia. It also proves to be the source of lung infections that generally occur in patients with debilitating conditions such as alcoholism, diabetes mellitus, and chronic obstructive pulmonary disease (2). The chromogenic substrate incorporated in the media is cleaved specifically by *Klebsiella* species. *K.pneumoniae*, the causative agent of pneumonia, produces a purple-magenta coloured colony thereby aiding in the easy detection of the organisms. Most of the frequently encountered gram-negative faecal contaminants are inhibited on this media using a selective supplement.

Peptone special and yeast extract provide the essential nutrients required for the growth of the organism. Sodium chloride maintains the osmotic equilibrium of the medium. Bile salts mixture and sodium lauryl sulphate (SLS) inhibit most of the accompanying flora. Addition of the selective supplement further increases the selectivity of the medium.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Light amber coloured, clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 4.08% w/v aqueous solution at 25°C. pH : 7.1±0.2

pH

6.90-7.30

Cultural Response

Cultural characteristics observed with added Klebsiella Selective Supplement (FD225) after an incubation at 35-37°C for 18-24 hours.

Cultural Response

Organism	Inoculum (CFU)	Growth	Recovery	Colour of Colony
Cultural Response				
<i>Enterobacter aerogenes</i> ATCC 13048	$\geq 10^3$	inhibited	0%	
<i>Escherichia coli</i> ATCC 25922	$\geq 10^3$	inhibited	0 %	
<i>Klebsiella pneumoniae</i> ATCC 13883	50-100	luxuriant	$\geq 50\%$	purple-magenta (mucoid)
<i>Salmonella Typhi</i> ATCC 6539	$\geq 10^3$	inhibited	0 %	
<i>Serratia marcescens</i> ATCC 8100	$\geq 10^3$	inhibited	0%	

Storage and Shelf Life

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

Reference

- 1.Krieg, N. R., and J. G. Holt, (Eds.), 1984, Bergeys Manual of Systematic Bacteriology, Vol. 1, p. 408 - 516. The Williams and Wilkins Co., Baltimore, MD.
- 2.Wyngaarden J. B., Smith L. H., (Eds.), Cecil Text book of Medicine,16th Ed, pp 1430 -1432, Philadelphia, W. B. Saunders, 1982.

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