HiCrome™ Klebsiella Selective Agar Base

M1573

Recommended for the isolation and detection of *Klebsiella* species from water and other sources.
This medium can also be used in membrane filtration procedure.

Composition **

Ingredients	Grams/Litre
Peptone, special	12.00
Yeast extract	7.00
Sodium chloride	5.00
Bile salts mixture	1.50
Sodium lauryl sulphate (SLS)	0.10
Chromogenic mixture	0.20
Agar	15.00

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 45-50°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 nitrogeneous and carbonaceous compounds, long chain amino acids, vitamins and other 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) inhibits most of the accompanying flora. Addition of the selective supplement further increases the selectivity of the medium.

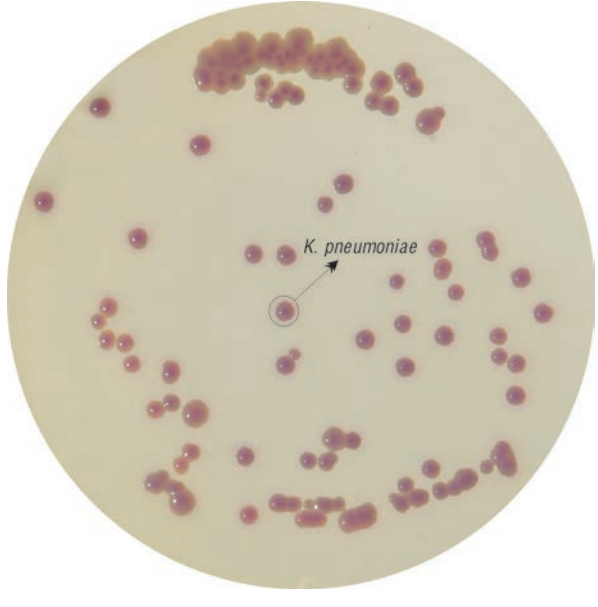
Type of specimen

Water samples

Specimen Collection and Handling

For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (3).

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



M1573 HiCrome™ Klebsiella Selective Agar Base

HiCromeVeg™ Single Streak Rapid Differentiation Series *Freedom from BSE / TSE worries*

HiCrome™ ***Klebsiella*** Selective Agar Base (M1573) is also available as HiCrome™ ***Klebsiella*** Selective HiVeg Agar Base (MV1573) wherein all the animal origin nutrients have been replaced by vegetable based nutrients.

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Warning and Precautions

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 specimens. Safety guidelines may be referred in individual safety data sheets

Limitations

Some organisms may show poor growth due to nutritional variation.

Performance and Evaluation

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

Quality Control

Appearance of Powder : Cream to yellow coloured, 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.
Cultural Response : Cultural characteristics observed with added *Klebsiella* Selective Supplement (FD225) after an incubation at 35-37°C for 18-24 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery	Colour of Colony
Klebsiella pneumoniae (13883) (00097*)	50-100	luxuriant	≥50%	purple-magenta (mucoid)
#*Klebsiella aerogenes* (13048) (00175*)	≥10^3	inhibited	0%	-
Escherichia coli (25922) (00013*)	≥10^3	inhibited	0%	-
Serratia marcescens (8100)	≥10^3	inhibited	0%	-
Salmonella Typhi (6539)	≥10^3	inhibited	0%	-

Key : * = corresponding WDCM Numbers
: Formerly known as *Enterobacter aerogenes*

Storage and Shelf-life

Store between 2-8°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle inorder to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. 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 sample must be decontaminated and disposed of in accordance with current laboratory techniques (4, 5).

References

1. Krieg, N. R., and J. G. Holt, (Eds.), 1984, Bergey's 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.
3. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C.
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.