HiCrome RajHans Medium, Modified (Salmonella Agar, Modified)

M1634

HiCrome RajHans Medium, Modified (Salmonella Agar, Modified) is recommended for identification and differentiation of *Salmonella* species from among the members of *Enterobacteriaceae*, especially *Proteus* species.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	8.000
Yeast extract	5.000
Peptic digest of animal tissue	4.000
Sodium chloride	5.000
Sodium deoxycholate	1.000
Agar	12.000
Neutral red	0.020
Lactose	3.000
Chromogenic mixture	4.320
Final pH (at 25°C)	7.3±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 42.34 grams in 1000 ml distilled water. Mix well and heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Cool to 45-50°C. Mix well before pouring in to sterile Petri plates.

Principle And Interpretation

HiCrome RajHans Medium,Modified is a modification of the original formulation of Rambach (1), used for differentiation of *Salmonella* species from *Proteus* species and other enteric bacteria. The original formulation is based on the novel characteristic of *Salmonella* species to produce acid from propylene glycol, which is detected by indicators present in the medium. These media are unique, because it is not based on acid production by propylene glycol. These media like many other media such as SS Agar, XLD Agar, recommended for the identification and differentiation of *Salmonella* species are based on lactose fermentation (2).

Casein enzymic hydrolysate, peptic digest of animal tissue and yeast extract supports the luxuriant growth of bacteria by providing carbonaceous, nitrogenous, vitamin B complex and other essential nutrients. Sodium deoxycholate inhibits gram-positive organisms rendering the medium selective for enteric microorganisms. The chromogenic mixture incorporated in the medium yields pink to red colonies of *Salmonella*. Lactose fermenting organisms form light purple to blue violet colonies. Other enteric gram-negative bacteria form colourless colonies.

Quality Control

Appearance
Light yellow to beige homogeneous free flowing powder

Gelling
Firm, comparable with 1.2% Agar gel.

Colour and Clarity of prepared medium
Light orange coloured, clear to slightly opalescent gel forms in Petri plates

Reaction
Reaction of 4.23% w/v aqueous solution at 25°C. pH : 7.3±0.2

pH
7.10-7.50

Cultural Response

M1634: Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
Escherichia coli ATCC 25922	50-100	luxuriant	>=50%	light purple
Klebsiella pneumoniae ATCC 13883	50-100	luxuriant	>=50%	blue-violet
Proteus mirabilis ATCC 25933	50-100	luxuriant	>=50%	colourless
Salmonella Typhimurium ATCC 14028	50-100	luxuriant	>=50%	pink-red
Salmonella Enteritidis ATCC 13076	50-100	luxuriant	>=50%	pink-red
Salmonella Typhi ATCC 6539	50-100	luxuriant	>=50%	colourless
Shigella flexneri ATCC 12022	50-100	luxuriant	>=50%	colourless
Staphylococcus aureus ATCC 25923	>=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.Rambach A., 1990, Environment. Microbiol, 56:301.
2.Greenberg A.E., Trussel R.R., Clesceri L.S., (Eds.), (1985), Standard Methods for the Examination of water and waste water, 16th ed., APHA, Washington, D.C.

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