



## HiCrome™ RajHans Medium (Salmonella Agar)

M1633

### Intended Use:

Recommended for identification and differentiation of *Salmonella* species from among the members of *Enterobacteriaceae*, especially *Proteus* species from clinical and non-clinical samples.

### Composition\*\*

Ingredients	Gms / Litre
Tryptone	8.000
Yeast extract	5.000
Peptone	4.000
Sodium chloride	5.000
Sodium deoxycholate	1.000
Neutral red	0.020
Lactose	3.000
Chromogenic mixture	7.300
Agar	13.500
Final pH ( at 25°C)	7.3±0.2

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

Suspend 46.82 grams in 1000 ml purified/ distilled water. Mix well and heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

### Principle And Interpretation

HiCrome™ RajHans Medium 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).

Tryptone, peptone and yeast extract supports the luxuriant growth of bacteria by providing carbonaceous, nitrogenous compounds, long chain amino acids, 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.

### Type of specimen

Clinical samples- stool, blood ; Food samples

### Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (3,4).

For food samples, follow appropriate techniques for sample collection and processing as per guidelines (5).

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

### Warning and Precautions

In Vitro diagnostic use. 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 clinical specimens. Safety guidelines may be referred in individual safety data sheets.

## Limitations

1. The medium is selective for *salmonella* and may not support the growth of other microorganisms.
2. Most of the *Salmonella* strains shows pink-red colonies except few which may show colourless colonies.
3. Due to nutritional variations, some strains may show poor growth.
4. Final confirmation of suspected colonies must be carried out by serological and biochemical tests.

## Performance and Evaluation

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

## Quality Control

### Appearance

Light yellow to pinkish beige homogeneous free flowing powder

### Gelling

Firm, comparable with 1.35% Agar gel.

### Colour and Clarity of prepared medium

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

### Reaction

Reaction of 4.68% w/v aqueous solution at 25°C. pH : 7.3±0.2

### pH

7.10-7.50

### Cultural Response

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

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
<i>Escherichia coli</i> ATCC 25922 (00013*)	50-100	luxuriant	≥50%	light purple
<i>Proteus mirabilis</i> ATCC 25933	50-100	luxuriant	≥50%	colourless
<i>Klebsiella pneumoniae</i> ATCC 13883 (00097*)	50-100	luxuriant	≥50%	blue-violet
<i>Salmonella</i> Typhimurium ATCC 14028 (00031*)	50-100	luxuriant	≥50%	pink-red
<i>Salmonella</i> Enteritidis ATCC 13076 (00030*)	50-100	luxuriant	≥50%	pink-red
<i>Salmonella</i> Typhi ATCC 6539	50-100	luxuriant	≥50%	colourless (on prolonged incubation light pink colour may be observed)
<i>Shigella flexneri</i> ATCC 12022 (00126*)	50-100	luxuriant	≥50%	colourless
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> ATCC 25923 (00034*)	≥10 <sup>4</sup>	inhibited	0%	

Key: (\*) Corresponding WDCM numbers

