



# Technical Data

## HiCrome™ Salmoconfirm Selective Agar

M2116

### Intended Use:

Recommended for the isolation, differentiation and confirmation of *Salmonella* species from coliforms from food, water and clinical samples by chromogenic method.

### Composition\*\*

Ingredients	g / L
Peptone special	15.000
Buffering agent	7.000
Selective agent	3.600
Chromogenic mixture	2.150
Agar	15.000
Final pH ( at 25°C)	7.0±0.2

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

### Directions

Suspend 42.75 gram in 1000 ml purified/distilled water. 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

*Salmonella* species have been isolated from humans and almost all animals throughout the world. They cause many types of infections from mild, self-limiting gastroenteritis to life threatening typhoid fever. *Salmonella* Typhi and *Salmonella* Paratyphi A & B cause gastroenteritis, bacteremia and enteric fever, *Salmonella* Choleraesuis causes gastroenteritis and enteric fever, especially in children. *Salmonella* Typhimurium is the most frequently isolated serotype of *Salmonella*. *Salmonella* is a cause of food poisoning(1). ISO 6539 specifies method for the detection, enumeration and serotyping of *Salmonella* from food and meat samples. After pre-enrichment and selective enrichment, the isolation is carried out on XLD Agar (M031I) and a second selective media has to be selected which is not based on H<sub>2</sub>S production (ISO).

XLD Agar is based on fermentation reaction and H<sub>2</sub>S production hence second medium should be selected so as to detect lactose positive and H<sub>2</sub>S negative strains. In addition to the positive control cultures (typical *Salmonella*), 3 additional *Salmonella* cultures are recommended to assist in the selection of atypical *Salmonella* colony morphology on selective agars. These cultures are a lactose-positive, H<sub>2</sub>S-positive *Salmonella* diarizonae (ATCC 12325) and a lactose-negative, H<sub>2</sub>S-negative *Salmonella* abortus equi (ATCC 9842); or a lactose-positive, H<sub>2</sub>S-negative *Salmonella* diarizonae (ATCC 29934). This medium is based on chromogenic differentiation wherein *Klebsiella* and *Enterobacter* species gives blue colour coloured colonies. *E.coli* gives colourless to light mauve coloured colonies, *Proteus* gives light brown coloured colonies. All *Salmonella* species gives purple coloured colonies. Peptone special supplies nitrogenous and carbonaceous compounds, long chain amino acids and other essential nutrients. Buffering agent buffers the medium. Chromogenic mixture imparts colour. Agar is the solidifying agent.

### Type of specimen

Clinical samples- faeces, Food samples; Water samples

### Specimen Collection and Handling

For clinical samples, follow appropriate techniques for sample collection and processing as per guidelines (1,2). For food samples, follow appropriate techniques for sample collection and processing as per guidelines (3,4). For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (5). After use, contaminated materials must be sterilized by autoclaving before discarding.

### Warning and Precautions

In Vitro diagnostic use. For professional use only. 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. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
2. Further biochemical and serological identification is necessary for confirmation.

## 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

Offwhite to pale yellow homogeneous free flowing powder

### Gelling

Firm, comparable with 1.5% Agar gel.

### Colour and Clarity of prepared medium

Off white coloured, opaque gel forms in Petri plates

### Reaction

Reaction of 4.3% w/v aqueous solution at 25°C. pH : 7.0±0.2

### pH

6.80 -7.20

### Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 24-36 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of Colony
<i>Salmonella</i> diarizonae ATCC 12325	50-100	luxuriant	≥50%	purple
<i>Salmonella</i> enterica subspecies enterica serovar Bispebjerg ATCC 9842	50-100	luxuriant	≥50%	purple
<i>Salmonella</i> diarizonae ATCC 29934	50-100	luxuriant	≥50%	purple
<i>Salmonella</i> Typhimurium ATCC 14028 (00031*)	50-100	luxuriant	≥50%	purple
<i>Salmonella</i> Enteritidis ATCC 13076 (00030*)	50-100	luxuriant	≥50%	purple
<i>Salmonella</i> Typhi ATCC 6539	50-100	luxuriant	≥50%	purple
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> ATCC 25923 (00034*)	≥10 <sup>4</sup>	inhibited	0%	
<i>Enterococcus faecalis</i> ATCC 29212 (00087*)	≥10 <sup>4</sup>	inhibited	0%	
<i>Escherichia coli</i> ATCC 25922 (00013*)	50-100	good	40-50%	colourless to light mauve
## <i>Proteus</i> <i>hauseri</i> ATCC 13315	50-100	good	40-50%	light brown
# <i>Klebsiella</i> <i>aerogenes</i> ATCC 13048 (00175*)	50 -100	luxuriant	≥50 %	blue
<i>Klebsiella</i> <i>pneumoniae</i> ATCC 13883 (00097*)	50 -100	luxuriant	≥50 %	blue

Key : \*Corresponding WDCM numbers, # Formerly known as *Enterobacter aerogenes*, ## Formerly known as *Proteus vulgaris*

## Storage and Shelf Life

Store dehydrated powder and prepared medium between 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order 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. 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 clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

## Reference

- 1.Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
- 2.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.
- 3.Microbiology of the food chain- Horizontal method for the detection, enumeration and serotyping of *Salmonella*- Part I Detection of *Salmonella* . International Organization for Standardization (ISO), ISO/DIS 6579-1:2017.
- 4.Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
- 5.Lipps WC, Braun-Howland EB, Baxter TE,eds. Standard methods for the Examination of Water and Wastewater, 24th ed. Washington DC:APHA Press; 2023.

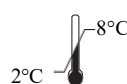
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