



Chromatic™ Salmonella / Hektoen Enteric

Selective media for the isolation and differentiation of pathogenic enterobacteria from food and clinical specimens.

DESCRIPTION

Chromatic™ Salmonella / Hektoen Enteric is a ready-to-use plate containing two distinct and selective media used for the detection of clinically significant enterobacteria.

Chromatic™ Salmonella allows the isolation of *Salmonella* species, including *S. Typhi*, and lactose-positive *Salmonella* as required by ISO 6579.

Hektoen Enteric Agar is formulated according to ISO 21567 for the isolation and differentiation of *Salmonella* and *Shigella* species.

TYPICAL FORMULA

Chromatic™ Salmonella	(g/l)	Hektoen Enteric Agar	(g/l)
Peptone	7.0	Enzymatic Digest of Meat	12.0
Meat Extract	1.0	Yeast Extract	3.0
Yeast Extract	3.0	Lactose	12.0
Sodium Chloride	5.0	Saccharose	12.0
Chromogenic and Selective Mix	3.7	Salicin	2.0
Tween 20	3.0 ml	Bile Salts No. 3	9.0
Agar	15.0	Sodium Chloride	5.0
Final pH 7.5 ± 0.2 at 25°C		Sodium Thiosulfate	5.0
		Ammonium Ferric Citrate	1.5
		Acid Fuchsin	0.1
		Bromothymol Blue	0.065
		Agar	15.0
		Final pH 7.5 ± 0.2 at 25°C	

METHOD PRINCIPLE

In Chromatic™ Salmonella, peptone and meat extract provide amino acids, nitrogen, carbon, vitamins and minerals required for organisms growth. Yeast extract is a source of vitamins, particularly of B-group. Sodium chloride maintains the osmotic balance of the medium. Chromogenic and selective mix allows to identify microorganisms on the basis of the color and morphology of the colonies while inhibiting Gram-positive bacteria. Agar is the solidifying agent.

In Hektoen Enteric Agar, enzymatic digest of meat provides amino acids, nitrogen, carbon, vitamins and minerals for organisms growth. Yeast extract is a source of vitamins, particularly of B-group. Lactose, saccharose and salicin are fermentable carbohydrates. Bile salts and acid fuchsin inhibit Gram-positive organisms. Ferric ammonium citrate, a source of iron, allows production of hydrogen sulfide (H₂S) present from sodium thiosulfate. Bromothymol blue is the pH indicator. Agar is the solidifying agent.

TEST PROCEDURE

Inoculate the plate by direct streaking or spread method. Incubate aerobically at 35 ± 2°C for 18-24 hours.

RESULTS INTERPRETATION

After incubation observe the color and the morphology of the colonies and interpret the results as indicated in the ID table.

ID Table.

Chromatic™ Salmonella		Hektoen Enteric Agar	
Microorganism	Typical colony color	Microorganism	Typical colony color
<i>Salmonella</i> spp (including <i>S. Typhi</i> and lactose fermenters)	Light mauve to mauve	<i>Shigella</i> spp	Green
Coliforms	Blue-green	<i>Salmonella</i> spp	Blue-green, with or without black centre
<i>E. coli</i> and other bacteria (if not inhibited)	Colorless	Coliforms (rapid lactose-saccharose-salicin fermenters)	Red-salmon

APPEARANCE

Chromatic™ Salmonella: clear, beige.

Hektoen Enteric Agar: slightly opalescent, green.

STORAGE

Store at 2-8°C away from light. Do not use the product beyond its expiry date on the label or if product shows any evidence of contamination or any sign of deterioration.

SHELF LIFE

4 months.

QUALITY CONTROL

Slides are inoculated with the microbial strains indicated in the QC table.

Inoculum for productivity: 50-100 CFU

Inoculum for selectivity: 10⁴-10⁶ CFU

Incubation conditions: 35 ± 2°C for 18-24 hours.

QC Table.

Microorganism		Growth on Chromatic™ Salmonella	Growth on Hektoen Enteric Agar
<i>Salmonella typhimurium</i>	ATCC® 14028	Good, mauve colonies	Good, blue-green colonies with or without black centre
<i>Shigella flexneri</i>	ATCC® 12022	Good, colorless colonies	Good, green colonies
<i>Shigella sonnei</i>	ATCC® 25931	Good, colorless colonies	Good, green raised colonies
<i>Escherichia coli</i>	ATCC® 25922	Good, colorless colonies	Inhibited
<i>Klebsiella pneumoniae</i>	ATCC® 13883	Good, blue-green colonies	Good, red-salmon colonies with zone of bile precipitate
<i>Enterobacter cloacae</i>	ATCC® 23355	Good, blue-green colonies	Good, red-salmon colonies with zone of bile precipitate
<i>Proteus mirabilis</i>	ATCC® 25923	Good, colorless colonies	Good, blue-green colonies with or without black centre
<i>Enterococcus faecalis</i>	ATCC® 19433	Partially to completely inhibited, blue-green colonies	Inhibited

WARNING AND PRECAUTIONS

The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product must be used by properly trained operators only.

DISPOSAL OF WAIST

Disposal of waist must be carried out according to national and local regulation in force.

BIBLIOGRAPHY

- ISO 21567:2004. Microbiology of food and animal feeding stuffs -- Horizontal method for the detection of *Shigella* spp.
- Perez J.M., P. Cavalli, C. Roure, R. Renac, Y. Gille, and A. M. Freydiere (2003) Comparison of Four Chromogenic Media and Hektoen Agar for Detection and Presumptive Identification of Salmonella Strains in Human Stools. J Clin Microbiol; 41(3):1130–1134.
- ISO 6579:2002. Microbiology of food and animal feeding stuffs -- Horizontal method for the detection of *Salmonella* spp.

PRESENTATION

Chromatic™ Salmonella / Hektoen Enteric

Packaging

20 plates

Ref.

18009

TABLE OF SYMBOLS

LOT Batch code	IVD <i>In vitro</i> Diagnostic Medical Device	 Manufacturer	 Use by	 Fragile, handle with care
REF Catalogue number	 Temperature limitation	 Contains sufficient for <n> tests	 Caution, consult Instruction For Use	 Do not reuse



LIOFILCHEM® s.r.l.

Via Scozia zona ind.le, 64026 Roseto degli Abruzzi (Te) Italy
Tel. +39 0858930745 Fax +39 0858930330 www.liofilchem.net liofilchem@liofilchem.net

