

MULLER KAUFFMANN BROTH

Enrichment basic medium for the detection of *Salmonella* spp. in water, food and faecal specimens.

TYPICAL FORMULA (g/L)

Tryptone	7.0
Soy peptone	2.3
Sodium Chloride	2.3
Calcium Carbonate	25.0
Sodium thiosulfate anhydrous	40.7
Bile salts N.°3	4.75
Iodine	3.8
Potassium iodide	4.75
Brilliant green	0.0095
Final pH	7.2 ± 0.2

DESCRIPTION

MULLER KAUFFMANN BROTH is an enrichment broth for the detection of salmonellae in water, food and faecal specimens. The medium is recommended by O.M. 11/10/78 for the enrichment of *Salmonella* in food specimens like milk, ice creams and pasteurized egg-base products and by ISO 6785 for the enrichment of *Salmonella* in milk and derived.

PRINCIPLE

Tryptone and soy peptone are sources of carbon, nitrogen, vitamins and minerals. Calcium carbonate is the buffer. Sodium thiosulfate is a source of sulphur. Bile salts and brilliant green inhibit the commensal microorganisms, favouring the isolation of salmonellae.

PREPARATION

The content of the tube presents a white sediment; turn upside down repeatedly in order to make homogeneous the solution. **MULLER KAUFFMANN BROTH** may be used as it is or aseptically aliquoted.

TECHNIQUE

MILK AND DERIVED

Transfer 25g of sample in 225mL of Buffered Peptone Water and incubate at 36 ± 1°C for 16-20 hours.

Transfer two 10mL aliquots from the pre-enrichment broth respectively in 100 mL of **MULLER KAUFFMANN BROTH** and in 100mL of SELENITE CYSTINE BROTH.

In case of milk examination transfer directly two 25mL aliquots of sample in 225 mL of the two selective enrichment broths.

Incubate the tubes of **MULLER KAUFFMANN BROTH** at 42 ± 1°C for 24 and 48 hours and of SELENITE CYSTINE BROTH at 36 ± 1°C for 24-48 hours.

Take a loopful of broth culture from the surface broth of the two selective media and inoculate BRILLIANT GREEN AGAR MODIFIED and BISMUTH SULFITE AGAR plates.

Incubate the plates at 36 ± 1°C for 18-24 hours.

FAECES

Inoculate 1g of sample in 10 mL of **MULLER KAUFFMANN BROTH** and incubate at 42°C for 12-18 hours.

Inoculate plates of two media suggested for the isolation of *Salmonella* from the tubes in which is present a remarkable microbial growth: SS Agar or Hektoen Enteric Agar or XLD Medium, Chromogenic Salmonella Agar, Mac Conkey Agar.

INTERPRETATION OF RESULTS

Observe the presence of typical *Salmonella* spp. colonies and confirm with further biochemical tests.

STORAGE

10-25°C away from light, until the expiry date on the label or until signs of deterioration or contamination are evident.

WARNING AND PRECAUTIONS

The product is not classified as hazardous by current legislation and does not contain harmful substances in concentrations of ≥1%. The product is designed for *In vitro* diagnostic use and must be used only by properly trained operators.

DISPOSAL of WASTE

Disposal of waste must be carried out according to the national and local regulations in force.

REFERENCES

1. ISO 6785 Milk and milk products – Detection of Salmonella 1stEd. 1985.
2. Muller, L.(1923) C.R. Soc. Biol. (Paris) 89, 434-443.
3. Kauffmann, F. (1935) Z.f.Hyg. 11,26-32.
4. O.M. 11/10/78: Limiti di cariche microbiche tollerabili in determinate sostanze alimentari e bevande. Gazzetta Ufficiale della Repubblica Italiana n.546 del 13/12/78.
5. Rapporto ISTISAN 96/35. ISSN 1123-3117. Metodi di analisi per il controllo microbiologico degli alimenti. Raccolta a cura di De Medici, L.Feniccia, L.Orefice e A.Stacchini.



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PRODUCT SPECIFICATION

NAME

MULLER KAUFFMANN BROTH

PRESENTATION

Glass bottles containing 100mL of medium.

STORAGE

10-25°C

PACKAGING

Code	Content	Packaging
402030	6 bottles x 100 ml	6 bottles in cardboard box

pH OF THE MEDIUM

7.2 ± 0.2

USE

MULLER KAUFFMANN BROTH is an enrichment broth for the detection of salmonellae in water, food and faecal specimens. The medium is recommended by O.M. 11/10/78 for the enrichment of *Salmonella* in food specimens like milk, ice cream and pasteurized egg-base products and by ISO 6785 for the enrichment of *Salmonella* in milk and derived.

TECHNIQUE

Refer to technical sheet of the product.

APPEARANCE OF THE MEDIUM

Appearance: eterogeneous with precipitates.
Colour: pale green with white precipitate.

SHELFLIFE






1 year

QUALITY CONTROL

- Control of general characteristics, label and print
- Sterility control
 - 7 days at 25 ± 1°C, in aerobiosis
 - 7 days at 36 ± 1°C, in aerobiosis
- Microbiological control
 - Inoculum for productivity: 10-100 UFC/ml
 - Inoculum for selectivity: 10⁴-10⁵ UFC/ml
 - Inoculum for specificity: ≤ 10⁴ UFC/ml
 - Incubation Conditions: 18-24 h at 42+/-1°C, in aerobiosis
 - After incubation, inoculate Mac Conkey Agar plates and incubate at 36+/-1°C for 18-24 hours.

Microorganisms		Growth	Features
<i>Escherichia coli</i>	ATCC 25922	+/-	Pink colonies with bile precipitates
<i>Salmonella typhimurium</i>	ATCC 14028	+	Colourless colonies

TABLE of SYMBOLS

IVD <i>In vitro</i> Diagnostic Medical Device	LOT Batch code	 Manufacturer	 Contains sufficient for <n> tests
REF Catalogue number	 Temperature limitation	 Use by	 Caution, consult accompanying documents



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