

# Muller Kauffmann Broth



Medium used for enrichment of *Salmonella* spp. from food and environmental samples.

## • CONTENTS (Liter)

Beef Extract	5.0 g
Peptone	10.0 g
Sodium Chloride	3.0 g
Calcium Carbonate	45.0 g
Sodium Thiosulfate (anhydrous)	38.1 g
Oxgall	4.7 g

## • PROCEDURE

Suspend 105.8 G of powder in 1L of distilled or deionized water. Heat to boiling until completely dissolved. DO NOT AUTOCLAVE. Cool to 45-50°C in water bath. Aseptically add 2 vials of Muller Kauffmann supplement (MB-M1847). Mix well. Dispense in the tube.

### Muller Kauffman supplement

1vial contents (each vial is sufficient for 500mL of medium)

Iodine	1.9 g
Potassium Iodine	2.375 g
Brilliant Green	0.00475 g

## • INTERPRETATION

Muller Kauffmann Broth is a medium used for enrichment of *Salmonella* spp. from food and environmental samples. Beef extract and peptone provide nitrogen, carbon, vitamins, and amino acids. Sodium Chloride maintains the osmotic balance of the medium. Calcium Carbonate neutralizes and absorbs toxic metabolites. Sodium thiosulfate is a source of sulfur. Oxgall and added brilliant green are selective agents which inhibit gram-positive and other gram-negative organisms.

## • TECHNIC

Inoculate the specimen with stab using a sterile needle to the medium. Shake gently for spreading microorganisms. Incubate at  $35 \pm 2$  °C for 18 - 24 hours and then subculture onto MacConkey Agar and incubate plated media at  $35 \pm 2$  °C for 18 - 24 hours. Refer appropriate references for recommended test procedure.

## • QUALITY CONTROL FOR USE

### Dehydrated medium

Appearance: free-flowing, homogeneous.

Color: white to off-white, may have a slight greenish tint.

### Prepared medium

Appearance: supernatant over a heavy white precipitate.

Color: very pale green with white precipitate..

Incubation conditions:  $35 \pm 2$  °C / 18 - 24 hours

then subculture onto MacConkey Agar /  $35 \pm 2$  °C / 18 - 24 hours

Microorganism	ATCC	Inoculum CFU	Growth
<i>Salmonella typhimurium</i>	14028	50-100	good
<i>Escherichia coli</i>	25922	$\geq 10^3$	inhibited

## • STORE

The powder is very hygroscopic. Store the powder at room temperature, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared medium at 2-8°C.

## • REFERENCES

1. Baird Parker. 1990. The Lancet. 336:1231.
2. Van Pelt and Valkenburgh. 2001. Zoonoses and zoonotic agents in humans, food, animals and feed in the Netherlands. <<http://www.keuringsdienstvanwaren.nl>>.
3. Hald et al. 1999. 3rd International Symposium of the Epidemiology and Control of Salmonella in Pork, Washington, D.C. 197.
4. Proietti, Pedrazzoli, Bosco, Galli, Canali and Franciosini. 2006. Presented at the Twelfth European Poultry Conference, Verona, Italy, 10 to 14 Sept. 2006.
5. Muller. 1923. C. R. Soc. Biol. (Paris) 89:434.
6. Kauffmann. 1935. Ztschr. F. Hyg. 117:26.

## • PACKAGE

Cat. No : MB-M1035 Muller Kauffmann Broth	500 G
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