MOELLER KCN BROTH BASE

CAT Nº: 1112

For the differentiation of enteric bacilli

FORMULA IN g/l

Disodium Phosphate	5.64	Peptone Mixture	3.00
Sodium Chloride	5.00	Monopotassium Phosphate	0.225

Final pH 7.6 ± 0.2 at 25°C

PREPARATION

Suspend 14 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Dispense into tubes and sterilize in autoclave at 121ºC for 15 minutes. Cool to 45-50ºC and aseptically add 15 ml of a 0.5 % potassium cyanide solution (0.5 g per 100 ml of sterile distilled water) to each tube containing 10 ml of medium and close tightly. The prepared medium should be store at 2-8°C. The color is amber, slightly opalescent.

The dehydrated medium should be homogeneous, free-flowing and beige in color. If there are any physical changes, discard the medium.

Caution: Take extreme care when handling cyanide solution. Do not pipette by mouth.

USES

MOELLER KCN BROTH BASE, supplemented with a solution of potassium cyanide, is used in the differentiation of enteric bacilli based on their ability to grow quickly in the presence of cyanide.

The medium facilitates the recognition and identification of enteric bacilli similar to *Citrobacter freundii*, especially those that are slow to fermentate but develop rapidly in the presence of cyanide. Also, this medium is very useful in differentiating *Salmonella* (including the Arizona group).

Peptone mixture provides nitrogen, vitamins, minerals and amino acids essential for growth. Sodium chloride supplies essential electrolytes for transport and osmotic balance. Sodium phosphate and Potassium phosphate provide minerals and ions and act as a buffer system.

Inoculate the medium lightly so that the inoculum cannot be misinterpreted as growth when cultures are examined. This may be accomplished by using a 3 mm loopful of an overnight (24 hours) broth cultura, or by transferring a light inoculum from an agar slant culture with a straight wire. Inoculate and incubate at 35 ± 2°C for 24 - 48 hours.

The following table indicates the growing of the important groups of Enterobacteria.

GROWTH	*Enterobacter* *Klebsiella* *Proteus* *Citrobacter* *Providencia* *Hafnia* *Serratia*	NO GROWTH	*Escherichia* *Arizona* *Salmonella* *Shigella*

MICROBIOLOGICAL TEST

The following results were obtained in the performance of the medium from type cultures after incubation at a temperature of 35 ± 2°C and observed after 24 - 48 hours.

Microorganisms	Growth
Enterobacter spp	Good
Citrobacter freundii ATCC 8090	Good
Proteus vulgaris ATCC 6380	Good
Escherichia coli ATCC 25922	Null
Salmonella enteritidis ATCC 13076	Null
Shigella flexneri ATCC 12022	Null

BIBLIOGRAPHY

Moeller. Acta Path. and Microbiol. Scand., 134:11 5. 1954.
Gershmand Cn. J. Mocrobiol, 1. 1960
Edwards and Ewing, Identification of Enterobacteriaceae. Burgess Publ. Co., Minneapolis, Minn., 1972.

STORAGE

Once opened keep powdered medium closed to avoid hydration.