E. Coli. Broth

Catalog : HB0105-1-5K

For the determination and enumeration of coliforms, especially E. coli, in water and other materials.

Approximate Formula:

Ingredients	gm/liter
Pancreatic digest of casein	20.0
Sodium chloride	5.0
Lactose	5.0
Dipotassium hydrogen phosphate	4.0
Potassium dihydrogen phosphate	1.5
Bile salt No.3	1.5
Final pH 6.9±0.2 at 25℃	

*Adjusted and/or supplemented as required to meet performance criteria.

Directions:

Suspend 37g of the medium in one liter of deionized or distilled water. Mix well. Heat until the medium is completely dissolved. Dispense in test tubes containing gas collecting tubes (Durham) and sterilize at 121 ℃ (15 lbs.) for 15 minutes.

Principle and Interpretation:

E.Coli Broth is a kind of cultivation medium, used for detection of fecal coliforms and E.Coli. The procedure employing EC Broth provides information regarding the source of the coliform group (fecal or non-fecal) when used as a confirmatory test.

Pancreatic digest of casein provides essential growth nutrients. Lactose is the fermentable sugar. Bile salts mixture inhibit gram-positive bacteria especially bacilli and faecal Streptococci. Phosphates control the pH during fermentation of lactose.Gas production in a fermentation tube within 24 hour or less is a presumptive evidence of the presence of coliform bacteria.This medium can be used at 37°C for the detection of coliform organisms or at 44.5°C for the isolation of Escherichia coli from water and shellfish) or 45.5°C for foods.

Appearance:

Dehydrated medium is a free-flowing yellowish powder. The prepared medium is a kind of yellowish transparent liquid.

Precautions:

This medium is for laboratory use only. Dried medium which is past shelf life, caking or color variation cannot be used.

Storage conditions and Shelf life:

E.Coli Broth must be stored tightly capped in the original container at 5-30°C. The dehydrated medium has a shelf life of 5 years from date of manufacturing. Prepared medium may be stored, out of direct light at 2-8°C.

Quality control:

Inoculate and incubate at 44.5±0.2 ℃ for 24 hours.

Microorganism	Strains	Inoculum (CFU)	Growth	Remarks
Escherichia coli	ATCC 25922	10-100	luxuriant	Turbidity 2; and gas is full with 1/3 of tube
Salmonella	ATCC 14028	10-100	luxuriant	Turbidity 2; non-aerosis
Enterococcus faecalis	ATCC 29212	1000-5000	inhibited	Turbidity 0(no growth) or Turbidity 1(Faint growth);
Citrobacter freundii	ATCC 43864	10-100	luxuriant	Turbidity 2; non-aerosis
Staphylococcus	ATCC 25923	1000-5000	inhibited	Turbidity 0(no growth)
Enterobacter cloacae	ATCC 23355	10-100	luxuriant	Turbidity 2; non-aerosis

Reference:

1. Hajna A. A. and Perry C. A., 1943, Am. J. Public Health, 33:550.
2. Fishbein M. and Surkiewicz B. F., 1964, Appl. Microbiol., 12:127.
3.GB4789.28-2013 People's Republic of China food safety national standard food microbiology test medium and reagent quality requirements.

Qingdao Hope Bio-Technology Co ., Ltd ., China Tel:0532-66087711 E-mail:qdhbywg@vip.126.com http://www.hopebiol.com