

HiTouch™ ECC Count *Flexi* plate

FL022

For enumeration (count) of *Escherichia coli* and coliforms

Composition**

Ingredients	Gms / Litre
Peptone special	6.000
Casein enzymic hydrolystae	3.300
Buffering agent	1.600
Sodium chloride	2.000
Sodium pyruvate	1.000
L-Tryptophan	1.000
Sorbitol	1.000
Tergitol	0.150
Chromogenic indicator	0.430
Agar	10.000
Final pH (at 25°C)	6.8±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Open the pouch in the protected area . Remove the wrapping and open the lid and carefully lift up the enclosed prepared medium plate so as to avoid touching the agar surface by hand.Touch the surface of agar plate onto the surface to be tested. Gently press the plate manually for upto 10 sencond. Apply constant and uniform pressure to the whole surface (ensuring that an even pressure of 25 gm/cm2 is distributed over the whole plate for 10 seconds). Replace exposed medium plate back in the base plate. Close the lid. Press the sides of the lid to make sure that it is fixed in the grooves. Disinfect the surface where the sample was taken in order to remove any possible traces of agar. Incubate the plates at specified temperature. After incubation as recommended count the number of colonies which have appeared on the surface of medium. Alternative Methods of Inoculation : To use as Culture Plate (ii), Sample Dilution Plate (iii) or Swabbing Plate (iv) To use as Gravitation Settling Plate (v)

Principle And Interpretation

Hitouch *Flexi* Plates are specially developed for the microbial testing in food , pharmaceutical, cosmetic,dairy, hospitals, water works, environmental testing etc. These plates are handy and ready to use sterile media supplied in flexible disposable plates, 55 mm in diameter. It is grid scored on the base and is irradiated to ensure perfect sterility. Medium is filled aseptically and each plate is packed in pre-sterilized plastic bag. Hitouch *Flexi* Plateis then packed in plastic pouch wrapping. The unique flexible plate configuration ensures close contact even with uneven surfaces. where not only counts are obtained but it is also possible to select and differentiate between groups of microorganisms like coliforms (both *E. coli* and non *E. coli*). These plates are specially developed for microbial testing, The Flexi plate medium formula is suitable for enumeration of *E. coli* and coliforms and the grids enable direct reading on the plates of the number of colonies per cm2.

Escherichia coli , a member of the family *Enterobacteriaceae* is a part of normal flora of the intestinal tract of humans and a variety of animals. Although most of *E. coli* does not cause gastrointestinal illnesses, certain groups of *E. coli* can cause life-threatening diarrhoea and sever sequelae or disability (1). HiCrome ECC Agar is a differential medium recommended for the presumptive identification of *E.coli* and other coliforms in food and environmental samples (2). The medium contains two chromogens. One of the chromogen is cleaved by the enzyme glucuronidase produced by *E.coli* to give blue to purple coloured colonies whereas the other chromogen is cleaved by the enzyme galactosidase, produced by majority of coliforms, resulting in the formation of rose-pink coloured colonies (3, 4).

Peptone special, yeast extract provide nitrogenous substances, vitamin B complex and other essential growth nutrients. Lactose is the fermentable carbohydrate, which aids in detecting lactose fermenters with neutral red as an indicator. Disodium hydrogen phosphate and potassium dihydrogen phosphate buffers the medium well. Sodium chloride maintains the osmotic equilibrium. Dry the surface of plate medium.

Quality Control

Appearance

Sterile plastic plate containing light pink opalescent firm gel.

Quantity of Medium

9ml of gel in plastic plate

Reaction

6.60- 7.00

Sterility test

Passes release criteria

Cultural response

Cultural characteristics was observed after incubation at 35-37°C for 18-24 hours.

Organism	Growth	Colour of Colony	X-glucuronide	Salmon gal
<i>Escherichia coli</i> ATCC 25922	good-luxuriant	dark blue to violet	Positive reaction	Positive reaction
<i>S. serotype enteritidis</i> ATCC 13076	good	light pink	Negative reaction	Negative reaction
<i>Shigella flexneri</i> ATCC 29508	good	colourless to slightly pink	Positive reaction	Negative reaction
<i>Citrobacter freundii</i> ATCC 8090	good-luxuriant	salmon to red (big)	Negative reaction	Positive reaction
<i>Enterobacter aerogenes</i> ATCC 13048	good-luxuriant	salmon to red	Negative reaction	Positive reaction
<i>Escherichia coli</i> 0157:H7 (NCTC 12900)	good-luxuriant	salmon to red	Negative reaction	Positive reaction
<i>Enterococcus faecalis</i> ATCC 29212	Inhibited	-	-	-

Storage and Shelf Life

Store between 2-8°C. Use before expiry date on the label.

Reference

- 1.Doyle M. P., (Ed.), 1989, Foodborne Bacterial Pathogens, Marcel Dekker, New York
- 2.Frampton E.W., Restaino L. and Blaszkowski N., 1988, J. Food Prot.,51:402.
- 3.Kilian M. and Bülow P., 1976, Acta. Pathol. Microbiol. Scand., Sect. B, 84:245.
- 4.Kilian M. and Bülow P., 1979, Acta. Pathol. Microbiol. Scand., Sect. B, 87:271.

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