

TMK 021- CHROMOGENIC ECC BROTH KIT

INTENDED USE

For rapid detection and confirmation of presence/absence *Escherichia coli* and coliforms from water sample on the basis of enzyme substrate reaction

PRODUCT SUMMARY AND EXPLANATION

Chromogenic ECC Broth is based on enzyme substrate reaction to detect *E. coli* and coliform in water sample, where recovery of *E.coli* is faster, more reliable and accurate. Most of the *E.coli* strains can be differentiated from other *coliforms* by the presence of enzyme glucuronidase, which is highly specific for *E.coli*. The chromogenic agent X-glucuronide used in this medium helps to detect glucuronidase activity of *E.coli*. *E.coli* cells absorb X-glucuronide and the intracellular glucuronidase enzyme splits the bond between the chromophore and the glucuronide. Change of colour to bluish green indicating the presence of *E.coli* and light yellow indicating the presence of *coliform*.

KIT CONTAINS

- Chromogenic ECC Broth dehydrated powder (2.2 g)

PRINCIPLE

The chromogenic agent X- Glucuronide used in this medium helps to detect glucuronidase activity. *Escherichia coli* cells absorb x-glucuronide and the intracellular glucuronidase splits the bond between the chromophore and the glucuronide. The released chromophore gives coloration to the colonies. The peptone provides the essential growth nutrients to the organisms. Bile salts mixture inhibits gram-positive organisms and agar acts as a solidifying agent.

INSTRUCTION FOR USE

Take 100 ml of sample to be tested in sterile disposable bottle. Add the whole quantity of medium by swirling to dissolve the powder completely. After dissolution, incubate the bottle at room temperature for 28-30 hours or at 35-37°C for 18-24 hours. Observe the change in colour of the medium from yellow to bluish green indicating the presence of *E. coli* and light yellow indicating the presence of *coliform* bacteria

QUALITY CONTROL SPECIFICATIONS

Appearance of powder : Cream to yellow colour, homogeneous free flowing powder
Appearance of prepared medium : Light yellow coloured clear solution

INTERPRETATION

Cultural characteristics observed after Incubation at room temperature for 28-30 hours or at 35-37°C for 18-24 hours.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Colour of medium
<i>Escherichia coli</i>	25922	50-100	Luxuriant	Bluish green
<i>Klebsiella pneumoniae</i>	13883	50-100	Luxuriant	Light yellow
* <i>Klebsiella aerogenes</i>	13048	50-100	Luxuriant	Light yellow
<i>Salmonella Typhimurium</i>	14028	50-100	Luxuriant	colourless

*formerly known as *Enterobacter aerogenes*



STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 15-30°C and protect from direct sunlight. The powder may be used up to the expiration date and incubated for the recommended incubation times.

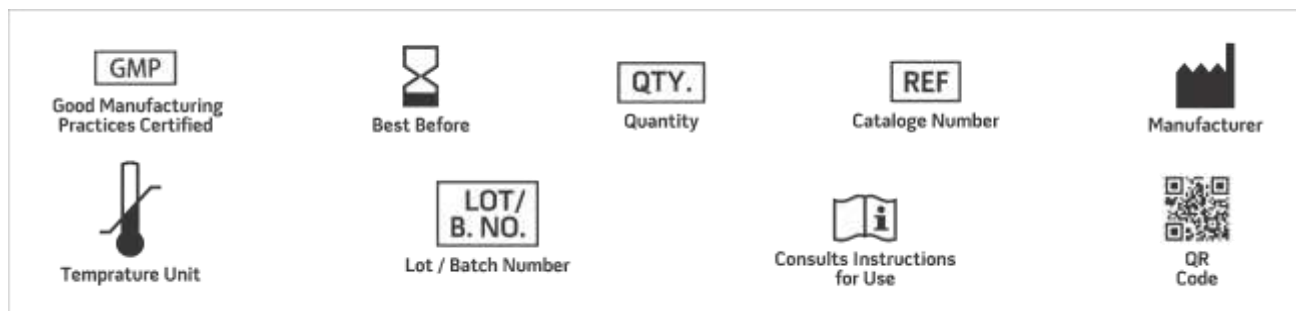
Product Deterioration: Do not use if powder show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C.
2. Frampton E.W., Restaino L. and Blaszkowski N., 1988, J.Food Prof., 51:402.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
4. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
5. LeMinor L. and Hamida F., 1962, Ann. Inst. Pasteur > 102:267
6. M. and Bülow P., 1976, Acta. Pathol. Microbiol. Scand Sect. B, 84:245.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**
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