CM 20622 – EC 0157:H7 SELECTIVE BROTH (TWIN PACK)

INTENDED USE

Recommended for the isolation of Escherichia coli O157:H7 from food samples.

PRODUCT SUMMARY AND EXPLANATION

Enterohemorrhagic E.colistrains are also termed as verocytotoxin-producing E.coli (VTEC/ EHEC). Although many different serotypes of Escherichia coli are known to produce verocytotoxin those of Escherichia coli O157:H7 and O157:H are so far the common types causing human infections. O157 VTEC strains have several unusual biochemical characters that are exploited in methods for their laboratory identification. Enterohemorrhagic E.coli (EHEC) can cause severe foodborne disease. EHEC is the primary cause of hemorrhagic colitis. This infection can also lead to hemolytic uremic syndrome. It is transmitted to humans primarily through consumption of contaminated foods, such as raw or undercooked ground meat products and raw milk. Its significance as a public health problem was recognized in 1982, following an outbreak in the United States of America. EHEC produces toxins, known as verotoxins or Shiga-like toxins
because of theirsimilarity to the toxins produced by Shigella dysenteriae.

COMPOSITION

Ingredients	Gms / Ltr
Part I	
Proteose peptone	5.000
Yeast extract	3.000
D-Mannitol	2.500
Sodium pyruvate	2.500
Potassium monophosphate	1.500
Sodium phosphate dibasic	3.500
Sodium chloride	5.000
Magnesium sulphate, anhydrous	0.300
Ferrous sulphate green, ACS	0.040
Sodium thioglycollate	0.100
Part II	
Niaproof 4	1.000
Tween 80	0.750

PRINCIPLE

The medium consists of Proteose peptone and yeast extract as carbon and nitrogen sources, long chain amino acids, vitamins and minerals. Phosphates buffer the medium. Magnesium sulphate and ferrous sulphate are sources of ions that simulate metabolism. Sodium chloride maintains the osmotic balance. Mannitol serves as a carbon source.

INSTRUCTION FOR USE

Dissolve 23.44 grams of Part I in 1000 ml purified / distilled water with 1.75 ml of Part II.
Heat if necessary to dissolve the medium completely. DO NOT AUTOCLAVE.
Cool to 45-50°C. Dispense into sterile tubes or flasks as desired.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Part I: Cream to yellow homogeneous free flowing powder Part II: Pale yellow to yellow viscous solution.
Appearance of prepared medium	: Yellow coloured, opalescent solution with slight precipitate.
pH (at 25°C)	: 7.1 ± 0.2

INTERPRETATION

Culturalcharacteristics observed after incubation.

Microorganism	Strains	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
Escherichia coli O157:H7	12900 NCTC	50-100	Good	35-37°C	18-24 Hours
Staphylococcus aureus	25923 ATCC	>=10^3	Inhibited	35-37°C	18-24 Hours
Salmonella Typhimurium	14028 ATCC	50-100	Good	35-37°C	18-24 Hours
Enterococcus faecalis	29212 ATCC	>=10^3	Inhibited	35-37°C	18-24 Hours
Escherichia coli	25922 ATCC	>=10^3	Good	35-37°C	18-24 Hours

PACKAGING:

Inpacksizeof500 gm bottles.

STORAGE

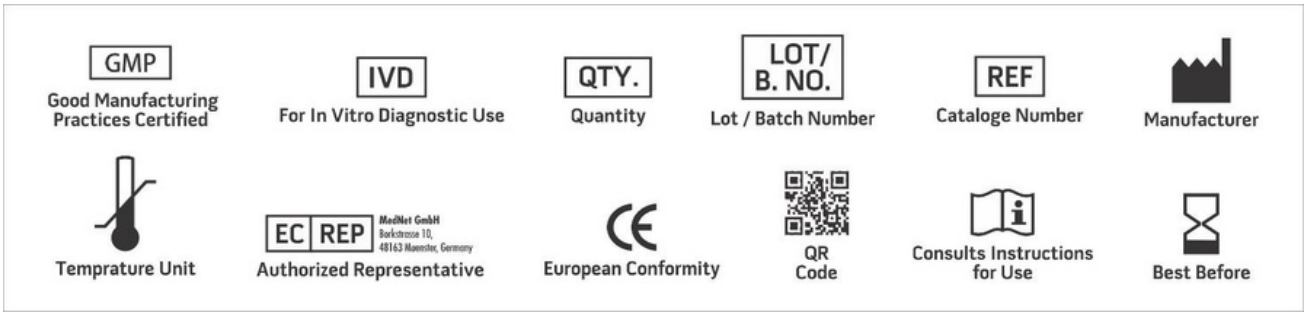
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they 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.Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
2. 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.
3. Salfinger Y., and Tortorello M.L. , 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
4. Smith and Scottland, 1988, J. Med. Microbiol., 26:77-85.
5.www.fda.gov/Food/ScienceResearch/LaboratoryMethods/BacteriologicalAnalyticalmanualBAM/default.html
6. www.who.int/mediacentre/factsheets/fs125/en/.



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

*For LabUse Only