

TM 2120 – CHROMOGENIC EC BROTH W/RUG

INTENDED USE

Recommended for detection of *Escherichia coli* in water and food samples by a chromogenic and fluorogenic method.

PRODUCT SUMMARY AND EXPLANATION

Escherichia coli is a member of faecal coliform group of bacteria. It is a member of the indigenous faecal flora of warm blooded animals. *E.coli* is considered a specific indicator of faecal contamination and the possible presence of enteric pathogens. *E.coli* can be reliably detected with media that contain a chromogenic or fluorogenic substrate for beta glucuronidase, an enzyme that occurs almost exclusively in *E. coli*.

Resorufin-beta-D-glucuronic acid methyl ester (RUG) is a highly sensitive chromogenic and fluorogenic indicator for *E.coli*. In contrast to MUG, RUG is more specific and does not require fluorescent detection. The released dye Resorufin itself gives intense pink color which can be visually detected. Additional confirmation can be done by observation of fluorescence under UV light.

§ Resorufin-beta-D-glucuronic acid methyl ester (RUG) is a patent of BIOSYNTH

COMPOSITION

Ingredients	Gms / Ltr
Yeast Extract	2.000
Sodium chloride	0.500
Casein acid hydrolysate	1.000
Salts	2.450
Chromogenic mixture	0.112
Buffers	4.500

PRINCIPLE

Yeast extract and Casein acid hydrolysate provides carbonaceous, nitrogenous substances, long chain amino acids, vitamins and other essential nutrients. Sodium chloride maintains osmotic equilibrium. The medium has a strong buffering system to control the pH in the medium Sodium lauryl sulphate inhibit gram-positive bacteria especially *Staphylococcus*, *Bacillus* species and faecal *Streptococcus*.

INSTRUCTION FOR USE

- Dissolve 10.56 grams in 1000 ml distilled water.
- Heat to boiling 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	: Pale yellow to orange homogeneous free flowing powder
Appearance of prepared medium	: Yellow coloured clear solution with slight precipitate.
pH (at 25°C)	: 7.0 ± 0.2

INTERPRETATION

Cultural characteristics observed after an incubation.

Microorganisms	ATCC	Inoculum (CFU/ml)	Growth	Color of the medium	*Fluorescence (at 366 nm)	Incubation Temperature	Incubation Period
<i>Escherichia coli</i>	25922	50-100	luxuriant	bright pink	positive, throughout the tube	35 - 37°C	18 - 24 Hours
<i>Escherichia coli</i>	10536	50-100	luxuriant	bright pink	positive, throughout the tube	35 - 37°C	18 - 24 Hours
<i>Citrobacter freundii</i>	8090	50-100	luxuriant	pale orange	Negative	35 - 37°C	18 - 24 Hours
<i>Salmonella Enteritidis</i>	10376	50-100	luxuriant	pale orange	Negative	35 - 37°C	18 - 24 Hours
<i>Staphylococcus aureus subsp. aureus</i>	25923	$\geq 10^3$	Inhibited	no colour change		35 - 37°C	18 - 24 Hours
<i>Bacillus subtilis subsp. spizizenii</i>	6633	$\geq 10^3$	Inhibited	no colour change		35 - 37°C	18 - 24 Hours

PACKAGING:

In pack size of 100 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 2-8°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. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
2. 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.
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.

 GMP Good Manufacturing Practices Certified	 Best Before	 Quantity	 Catalogue Number	 Manufacturer
 Temperature Unit	 Lot / Batch Number	 Consults Instructions for Use	 QR Code	

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

***For Lab Use Only**
Revision: 08 Nov., 2019