

Blue Light Broth

(Rapid test for Coliform group and *E. coli*)

Code	Form	Package	Storage	Shelf Life
05607	Granule	300 g	Dry, RT	3 years

Directions

Suspend 17.4 g of the dehydrated medium in 1,000 mL of distilled water, mix well and heat to dissolve the medium. Distribute necessary amounts of medium into test tube. Sterilize by autoclaving at 121 °C for 15 minutes.

Remarks

The medium is used for the test for coliform group and *E. coli* in foodstuffs or water. Coliform group changes the medium blue to blue-green after incubation at 35 - 37 °C for 24 hours. Fluorescent is observed when the positive medium is exposed to UV light (365 nm), if *E. coli* is present. X-GAL (colorimetric enzyme substrate) in the medium is decomposed to bring out blue/blue-green color by β -galactosidase produced by coliform group.

MUG in the medium is decomposed by β -glucuronidase to be produced by *E. coli* to

isolate a fluorescence substance of 4-Methyl-Umbelliferone.

Formula

Components	In 17.4 g/L
Peptone	5.0 g
Sodium Chloride	5.0 g
Sodium Pyruvate	1.0 g
Potassium dihydrogen phosphate	1.0 g
Dipotassium Phosphate	4.0 g
Potassium nitrate	1.0 g
Sodium Lauryl Sulfate	0.1 g
Isopropyl-β-D(-)-Thiogalactopyranoside (IPTG)	0.1 g
5-bromo-4-chloro-3-indolyl-β-D-galactopyranoside (X-GAL)	0.1 g
4-Methyl-Umbelliferyl-β-D-Glucuronide (MUG)	0.1 g

pH 7.1 ±