

Product Data Sheet

COLIFORM BROTH

Product No. GB-DCM-00022-1A

INTENDED USE

For isolation and cultivation of coliform organisms from milk and milk products.

PRODUCT SUMMARY

Bacteriological Examination of water samples to determine its suitability for drinking and other domestic purpose has traditionally been done by the most probable number (MPN) procedures or the membrane filter (MF) technique. The presence of total coliforms, faecal coliforms or Escherichia coli is well recognized as an indication of unsafe or poor water quality for which corrective measures should be taken. Coliform Broth is recommended for isolation and cultivation of coliforms organisms from cream yogurt and raw milk. Coliforms that ferment lactose produce acid and gas. The acidity formed is indicated by a colour change of the medium from purple to yellow, indicated by the pH indicator dye bromo cresol purple.

Product Specifications

Ingredients	Gms / Ltr
Proteose peptone	10.000
Yeast extract	6.000
Bile salts	20.000
Sodium deoxycholate	1.000
Lactose	20.000
Sodium lauryl sulphate (SLS)	1.000
Bromocresol purple	0.035

INSTRUCTION FOR USE

- Dissolve 57.14 grams in 1000 ml purified / distilled water.
- Heat if necessary to dissolve the medium completely.
- Dispense in tubes or flasks as desired and sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 45-50° C. Mix well and pour into sterile Petri plates.

DISPOSAL

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

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Acid	Gas	Incubation Temperature	Incubation Period
Klebsiella aerogenes	13048	50-100	Good - Luxuriant	Positive reaction, yellow colour	Positive reaction	35-37°C	18-48 Hours
Escherichia coli	25922	50-100	Good - Luxuriant	Positive reaction, yellow colour	Positive reaction	35-37°C	18-48 Hours
Staphylococcus aureus	25923	$\geq 10^3$	Inhibited	-	-	35-37°C	18-48 Hours
Salmonella Typhimurium	14028	50-100	Good - Luxuriant	Negative reaction, no colour change	Negative reaction	35-37°C	18-48 Hours

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder. Cream to yellow homogeneous free flowing powder.
 Appearance of prepared medium: Purple coloured, clear solution without any precipitate.
 pH (at 25°C) : 7.0±0.2

PRINCIPLE

Sodium deoxycholate and bile salts inhibit gram positive bacteria. Sodium lauryl sulphate is inhibitory to many organisms but not to coliforms. A distinct yellow colour results from the fermentation of lactose and gas production can be detected as bubbles with gentle shaking. Proteose peptone and yeast extract provides nitrogenous and carbonaceous compounds, vitamin B complex and other nutrients. Lactose is the fermentable carbohydrate. Bromo cresol purple is the pH indicator.

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.

This product is for research use only.