OXFORD LAB FINE CHEM LLP
ISO 9001-2008 Certified Company

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Oxford
Range of
Laboratory Chemicals

TECHNICAL DATA SHEET

Coliform Broth

Principle

Coliform broth is composed of proteose peptone, yeast extract, bile salts, sodium deoxycholate, lactose, sodium lauryl sulphate and bromocresol purple. Peptone and yeast extract provide carbon, nitrogen sources and essential growth factors required for growth of microorganisms. Sodium deoxycholate and bile salts inhibit gram positive bacteria. Lactose is fermentable sugar. Sodium lauryl sulphate is inhibitory to many organisms but not to coliforms. The bromocresol purple is pH indicator dye. The coliform organism has ability to ferment lactose, with the acid and gas production. Due to the acid production the color of medium changes from purple to yellow. The gas production is detected by gas trapped in Durham's tubes.

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

Contents*

Ingredients	Gram/Litre
Proteose peptone	10.000
Yeast Extract#	6.000
Bile salts	20.000
Sodium deoxycholate	0.100
Lactose	20.000
Sodium lauryl sulphate	1.000
Bromocresol purple	0.035
pH at 25˚C	7.0 ±0.2

*** Formula adjusted for optimum performance and parameters**
 # Equivalent to Beef Extract

Directions: Dissolved 57.00 grams in 1000 ml distilled water. Boil to dissolve the medium completely and distribute aseptically in test tubes containing inverted Durham's tubes. Sterilize by autoclaving at 15 lbs. pressure (121°C) for 15 min, cool it to 42-45 °C and inoculate test sample aseptically.

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Specimens types analyzed

Dairy products like cream, yogurt and raw milk etc.

Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	**Light Beige color free flowing, homogeneous powder**
Reaction of 5.70% solution	**7.0 ±0.2 at 25 ˚C**
pH	**6.80-7.20**
Color and clarity of ready medium	**Purple color, clear slightly opalescent solution**
Growth Promotion properties	**Best at ≤ 100 CFU at 32-37 ºC for 18-72 h**
Indicative properties	**Optimum at ≤ 100 CFU at 32-37 ºC for 18-48 h**
Negative control	**Performed using sterile distilled water**

Different Microbial Response: Cultural characteristics observed after incubation at 33-37°C for 18-48 hours. (Inoculum 50-100 CFU)

Organism	ATCC	Growth	Acid and gas production	
			Acid	Gas
Escherichia coli	8739	Luxurious	Positive	Positive
Salmonella typhimurium	14028	Luxurious	Negative	Negative
Klebsiella aerogenes	13048	Luxurious	Positive	Positive
Staphylococcus aureus	25923	Inhibited	--	--

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Storage and Shelf Life: **The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label. Note: Sterilize media immediately after reconstitution.**

Disposal: **To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.**

Reference

1. **American Public Health Association, (1978)** ***Standard Methods for the Examination of Dairy Products*****, 14th Ed., Washington**
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3. **Monk, J. D., R. S. Clavero, L. R. Beuchat, M. P. Doyle, and R. E. Brackett. (1994).** ***Irradiation inactivation of Listeria monocytogenes and Staphylococcus aureus in low-and high-fat, frozen and refrigerated ground beef*****. J. Food Prot. 57:969-974.**
4. **Wehr H. M. and Frank J. H., (2004),** ***Standard Methods for the Microbiological Examination of Dairy Products*****, 17th Ed., APHA Inc., Washington, D.C.**
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