OXFORD LAB FINE CHEM LLP
ISO 9001-2008 Certified Company

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Oxford
Range of
Laboratory Chemicals

TECHNICAL DATA SHEET

OXYcrome Chromogenic Tryptone Bile Glucuronide Agar (TBX Agar)

Principle

Tryptone bile glucuronic agar is selective agar for the detection and enumeration of *Escherichia coli* in foodstuffs, animal feed, water and clinical samples. Media is composed of tryptone, bile salt, X-β-Dglucoronic acid, dimethyl sulfoxide and agar. Tryptone provides nitrogen and amino acids and other trace nutrients required for the growth of bacteria. Bile salt inhibits the growth of gram-positive bacteria. X-β-Dglucoronic acid is chromogenic substrate on hydrolysis from blue color and indicator of β-glucuronidase enzyme. The *Escherichia coli* produce β-glucuronidase enzyme and form blue colonies while βglucuronidase negative bacteria show colorless colonies. Among the Enterobacteriaceae only *E. coli*, and some strains of *Salmonella* and *Shigella*, are β-glucuronidase positive species since grow as blue color colonies.

Use: For the enumeration of Escherichia coli from food samples, animal feed and water samples.

Contents*

Ingredients	Gram/Litre
Tryptone	20.000
Bile Salt	1.500
X-B-D-Glucuronic Acid	0.075
Dimethyl sulfoxide	3.000
Agar	15.000
pH at 25˚C	7.2 ±0.2

*** Formula adjusted for optimum performance and parameters**

Directions: Dissolve 39.60 grams in 1000 ml distilled water. Boil to dissolve the medium completely and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 min, cool it to 42-45 °C and distribute aseptically in petri plates. Ensure complete solidification and inoculate test sample aseptically.

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Specimens types analyzed

Pharmaceutical samples, clinical and non-clinical samples etc.

Precautions to be taken

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	**Beige colored free flowing, homogeneous powder**
Reaction of 3.96% solution	**7.2 ±0.2 at 25 ˚C**
pH	**7.00- 7.40**
Gelling	**Firm comparable with 1.5% agar gel**
Color and clarity of ready medium	**Light amber colored opalescent gel**
Growth Promotion properties	**Best at ≤ 100 CFU at 32-37 ºC for 18-48 hours**
Indicative Properties	**Optimum at ≤ 100 CFU at 32-37 ºC for 18-24 hours**
Negative control	**Performed using sterile distilled water**

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Different Microbial Response

Organism	Inoculum	Growth	Recovery	Colony color	Incubation
Escherichia coli **(ATCC 8739)**	**50-100**	**Luxuriant**	**≥ 70%**	**Blue**	**44°C, 18-24 hours**
Enterococcus faecalis **(ATCC 14506)**	**50-100**	**Inhibited**	**-**	**--**	**44°C, 18-24 hours**

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. **Atlas, R. M. (2005).** ***Handbook of media for environmental microbiology*****. CRC press.**
2. **ISO 16649-2; Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of β-glucuronidase-positive *Escherichia coli* - Colony-count technique at 44°C using 5bromo-4-chloro-3-indolyl β-D-glucuronide**

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