



Technical Data Sheet

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MUG Lauryl Sulphate Broth

RDM-LSB-02

Principle

MUG Lauryl sulphate broth is composed of tryptose, lactose, potassium phosphate dibasic and monobasic, sodium chloride and sodium lauryl sulfate. Tryptose provides nitrogen and amino acids. Lactose is fermentable carbohydrate. Potassium phosphates are buffering agents. Sodium chloride maintain osmotic balance. Sodium lauryl sulfate inhibits non-coliforms. The selectivity to the medium is provided by lactose and sodium lauryl sulfate. 4-methylumbelliferyl- β -D-glucuronide (MUG) is hydrolyzed by an enzyme β -glucuronidase possessed by organisms to yield 4-methylumbelliferone, a fluorescent end product.

Use: Recommended for detecting coliform organisms in water and wastewater.

Contents*

Ingredients

	Gram/Liter
Tryptose	20.000
Lactose	5.000
Potassium Phosphate Dibasic	2.750
Potassium Phosphate Monobasic	2.750
Sodium Chloride	5.000
Sodium Lauryl Sulfate	0.100
4-Methylumbelliferyl β -D-glucuronide (MUG)	0.050
pH at 25°C	6.8 $\pm$ 0.2

* Formula adjusted for optimum performance and parameters

Directions: Dissolve 35.65 grams in 1000 ml distilled water. Boil to dissolve the medium completely and distribute in test tube containing inverted Durham's tube. Sterilize by autoclaving at 15 lbs. pressure (121°C) for 15 min, cool it to 42-45 °C and inoculate test sample aseptically.

Specimens types analyzed

Food, dairy and water 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	Light beige colored free flowing, homogeneous powder
Reaction of 3.56% solution	6.8 $\pm$ 0.2 at 25 °C
pH	6.60- 7.00

Color and clarity of ready medium	Light amber colored clear opalescent solution
Growth Promotion properties	Best at ≤ 100 CFU at 32-37 °C for 18-72 h
Indicative properties	Optimum at ≤ 100 CFU at 32-37 °C for 18-48 h
Negative control	Performed using sterile distilled water

Different Microbial Response: Cultural characteristics observed after incubation at 33-37°C for 18-24 hours. Inoculum 50-100 CFU. Indole production observed after adding few drops of Kovacs reagent (RDM-R-01).

Organism	ATCC	Growth	Fluorescence under UV light at 360 nm	Indole Production
<i>Escherichia coli</i>	8739	Luxuriant	Positive	Positive
<i>Escherichia coli</i>	25922	Luxuriant	Positive	Positive
<i>Klebsiella aerogenes</i>	13048	Luxuriant	Negative	Negative

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. Difco Manual (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.
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.
5. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

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CHAITANYA AGRO BIOTECH PVT. LTD.

An ISO 11133:2014, ISO 13485:2016, ISO 9001:2015 CE, CIN NO.: U24210MH1995PTC095220S,
S. No. 120/2, Laxmi Nagar, Umbarnala Road, Malkapur-443101, Dist.: Buldana (M.S.) India. Customer Care +91-8669083859
rdmsales@chaitanyagroupindia.com, mkt.cabt@chaitanyagroupindia.com, www.chaitanyagroupindia.com