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Drigalski Selective Agar

Designed For the selective isolation of Enterobacteria from urine stool and other clinical samples on the basis of their ability to ferment lactose.

REF: BS.1/TG01.100.0100	100 Gram	REF: BS.1/TG01.250.0250	250 Gram
REF: BS.1/TG01.500.0500	500 Grams		

CLINICAL SIGNIFICANCE

Drigalski Selective Agar was formulated by Ewing (1), based on the original medium developed by Drigalski and Conrad (2) for the isolation and differentiation of enteric pathogens. The medium contains lactose as a fermentable carbohydrate and carbon source. Peptone, yeast extract, and HM extract provide essential nitrogenous nutrients to support bacterial growth. Crystal violet and sodium deoxycholate act as selective agents by inhibiting the growth of Gram-positive bacteria, while bromothymol blue serves as the pH indicator. Lactose-fermenting organisms produce acid, resulting in a decrease in pH and a colour change to yellow, with yellow colonies and surrounding zones. In contrast, non-lactose-fermenting organisms produce blue to green colonies due to the absence of acid production and the resulting alkaline reaction. Accordingly, non-lactose-fermenting Gram-negative enteric pathogens, such as Salmonella, Shigella, Proteus, and Pseudomonas, typically produce blue to green colonies, whereas lactose-fermenting coliforms, including *E. coli, Klebsiella,* and Enterobacter, produce yellow colonies.

MEDIA COMPOSITION

Item	Formula per liter of medium g/l
Tryptone	15.0 gm.
Yeast Extract	.30 gm.
Meat extract	3.0 gm.
Sodium deoxy cholate	1.0 gm.
Sodium thiosulphate	1.0 gm.
Lactose	15.0 gm
Crystal violet	0.005 gm
Bromo thymol blue	0.08 gm
Agar	11 gm

Final pH 7.4 ± 0.2 at 25°C

PRECAUTIONS AND WARNINGS

Media to be handled by entitled and professionally educated person. Do not ingest or inhale.

Good Laboratories practices using appropriate precautions should be followed in:

- Wearing personnel protective equipment (overall, gloves, glasses,).
- Do not pipette by mouth.
- In case of contact with eyes or skin; rinse immediately with plenty of soap and water. In case of severe injuries; seek medical advice immediately.
- Respect country requirement for waste disposal.

S56: dispose of this material and its container at hazardous or special waste collection point.

S57: use appropriate container to avoid environmental contamination.

S61: avoid release in environment.

For further information, refer to the Drigalski Selective Agar material safety data sheet.

STORAGE AND STABILITY

BioScien Drigalski Selective Agar should be stored between 10-30°C in a firmly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to avoid lump development due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in a dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

PREPARATION

Suspend 49.09 grams in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

Deterioration

The color of BioScien Drigalski Selective Agar is Light yellow to greenish yellow homogeneous free flowing powder, may have slight dye particles. Prepared Media Green coloured, clear to slightly opalescent gel forms in Petri plates .If there are any physical changes for powder or signs of deterioration (shrinking, cracking, or discoloration), and contaminations for hydrated media, discard the medium.

SPECIMEN

Clinical samples - Urine, stool

EQUIPMENT REQUIRED NOT PROVIDED

- Inoculating loops, swabs, collection containers
- Incubators
- Sterile petri plates
- Anaerobic chamber / anaerobic jars

QUALITY CONTROL

To ensure adequate quality control, it is recommended that positive and negative control included in each run. If control still out of range please contact ***BioScien*** technical support

PERFORMANCE CHARACTERISTICS

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	growth	Colour of colony
Klebsiella pneumoniae ATCC 13883	Luxuriant	yellow, mucoid
Salmonella Typhi ATCC 6539	Luxuriant	Blue to green
Escherichia coli ATCC 25922	luxuriant	yellow
Pseudomonas aeruginosa ATCC 27853	good	Blue - green
Shigella flexneri ATCC 12022	luxuriant	Blue to green

REFERENCES

1.Ewing, 1986, Edwards and Ewing's identifications of the Enterobacteriaceae, 4th Ed. Elsevier Science Piblishing CO., Inc.New York.
2.Drigalski V. and Conrad H., 1902, Z. Hyg. Infektionskr., 39:283.
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.

SYMBOLS IN PRODUCT LABELLING	
LOT Batch Code/Lot number	Caution
REF Catalogue Number	Do not use if package is damaged
Temperature Limitation	Consult Instruction for use
Expiration Date	
Manufactured by	