



Drigalski Selective Agar

M1761

Drigalski Selective Agar is used for the selective isolation of enterobacteria from urine, stool and other clinical samples. Enterobacteria are differentiated on the basis of their ability to ferment lactose.

Composition**

Ingredients	Gms / Litre
Peptone	15.000
Yeast Extract	3.000
Meat Extract	3.000
Sodium deoxycholate	1.000
Sodium thiosulphate	1.000
Lactose	15.000
Crystal violet	0.005
Bromothymol blue	0.080
Agar	11.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

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

Principle And Interpretation

Drigalski Selective Agar, is formulated by Ewing (1), based on the medium developed by Drigalski and Conrad (2) for the detection of enteric pathogens.

The medium contains lactose as the source of carbon and fermentable carbohydrate. Peptone, yeast extract and meat extract provide nitrogenous nutrients to the organisms. Crystal violet and sodium deoxycholate inhibit the development of gram positive bacteria. Bromothymol blue is the pH indicator in the medium. Lactose fermenters produce acid and thus change the colour to yellow with yellow zones. Lactose non-fermenters develop blue colonies on the medium due to alkalization. Non lactose fermenting gram-negative (enteric) pathogens (*Salmonella, Shigella, Proteus, Pseudomonas*) form blue to green colonies whereas lactose fermenting coliform organisms (*E.coli, Klebsiella, Enterobacter*) form yellow colonies due to acid production and decrease in pH.

Quality Control

Appearance

Light yellow to greenish yellow homogeneous free flowing powder, may have slight dye particles

Gelling

Firm, comparable with 1.1% Agar gel.

Colour and Clarity of prepared medium

Green coloured, clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 4.91% w/v aqueous solution at 25°C. pH : 7.4±0.2

Cultural Response

M1761: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
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<i>Klebsiella pneumoniae</i> ATCC 13883	50-100	good-luxuriant	>=50%	yellow, mucoid
<i>Escherichia coli</i> ATCC 25922	50-100	luxuriant	>=50%	yellow
<i>Salmonella Typhi</i> ATCC 6539	50-100	luxuriant	>=50%	blue to green
<i>Shigella flexneri</i> ATCC 12022	50-100	luxuriant	>=50%	blue to green
<i>Pseudomonas aeruginosa</i> ATCC 27853	50-100	good	>=50%	blue-green

Storage and Shelf Life

Store below 30°C and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference

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

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