



Davis Supplemented Minimum Medium w/o Glucose

M1401

Davis Supplemented Minimum Medium w/o Glucose is recommended for for enrichment and titre determination of coliform bacteria.

Composition**

Ingredients	Gms / Litre
Tryptone	2.000
Yeast extract	2.000
Dipotassium hydrogen phosphate	7.000
Potassium dihydrogen phosphate	3.000
Ammonium sulphate	1.000
TriSodium citrate dihydrate	0.500
Magnesium sulphate heptahydrate	0.100
Agar	15.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 30.49 grams (the equivalent weight of dehydrated medium) in 980 ml 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. Aseptically add 20 ml of filter sterilized glucose solution (2 gms glucose dissolved in 20 ml distilled water). Mix thoroughly and pour into sterile Petri plates.

Principle And Interpretation

Lederberg (1) described the Davis formulation for Minimal Davis Broth used for enrichment and titre determination of coliform bacteria. It is used for isolating nutritional mutants of coliforms. Tryptone and yeast extract provides necessary organic carbon and nitrogen source. The medium contains citrate and phosphate as buffer salts. Ammonium sulphate is the inorganic nitrogen source. Magnesium is a cofactor for many metabolic reactions.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of Prepared Medium

Yellow coloured clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 3.05% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH

6.80-7.20

Cultural Response

M1401: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Growth
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Cultural Response	
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<i>Enterobacter aerogenes</i>	good
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ATCC 13048

<i>Escherichia coli</i> ATCC	good
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Storage and Shelf Life

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

Reference

1. Leberberg. 1950. Methods in Med. Res, 3:5.

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