

TM 976 – DAVIS SUPPLEMENTED MINIMUM MEDIUM W/O DEXTROSE

INTENDED USE

For enrichment and determination of titre coliforms in water samples.

PRODUCT SUMMARY AND EXPLANATION

Lederberg 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.

COMPOSITION

| Ingredients | Gms / Ltr |
|---------------------------------|-----------|
| 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 |

PRINCIPLE

The medium consists of Tryptone and yeast extract which 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.

INSTRUCTION FOR USE

- Dissolve 30.49 grams in 980 ml purified/distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 45-50°C and aseptically add 20 ml of filter sterilized glucose solution (2 gms glucose dissolved in 20 ml purified/distilled water).
- Mix well before pouring into sterile petri plates.

QUALITY CONTROL SPECIFICATIONS

- Appearance of Powder** : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Yellow coloured clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C) : 7.0 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.



| Microorganism | ATCC | Inoculum (CFU/ml) | Growth | Recovery | Incubation Temperature | Incubation Period |
|-----------------------------|-------|-------------------|--------|----------|------------------------|-------------------|
| <i>Klebsiella aerogenes</i> | 13048 | 50-100 | Good | 40-50% | 35-37°C | 18-24 Hours |
| <i>Escherichia coli</i> | 25922 | 50-100 | Good | 40-50% | 35-37°C | 18-24 Hours |

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.










Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C.
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
3. 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.
4. Leberberg. 1950. Methods in Med. Res, 3:5.

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|  GMP Good Manufacturing Practices Certified |  Best Before |  QTY. Quantity |  REF Catalogue Number |  Manufacturer |
|  Temperature Unit |  LOT/ B. NO. Lot / Batch Number |  Consults Instructions for Use |  QR Code | |

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

*For Lab Use Only
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