

## TM 220 - MINIMAL BROTH, DAVIS W/O DEXTROSE

### INTENDED USE

For isolation and characterization of nutritional mutants of *Escherichia coli*.

### PRODUCT SUMMARY AND EXPLANATION

Minimal media can be supplemented with the desired additives to study nutritional characters of the nutritional mutants. Minimal media are the formulations of Davis as described by Lederberg.

A cell suspension of wild type *Escherichia coli* is irradiated and cultured on Minimal Agar and incubated at 35°C for 24 hours. The isolated colonies are cultured in tubes of Minimal Broth Davis and Minimal Broth Davis without Dextrose. After 24 hours' incubation at 35°C growth in the Minimal Broth, Davis and absence of growth in the Minimal Broth Davis without Dextrose indicates a mutant.

### COMPOSITION

Ingredients	Gms / Ltr
Dipotassium phosphate	7.000
Monopotassium phosphate	2.000
Sodium citrate	0.500
Magnesium sulphate	0.100
Ammonium sulphate	1.000

### PRINCIPLE

Minimal medium contains the necessary nutrients only for the growth of wild type *Escherichia coli* strains. By the random isolation method described by Lederberg, nutritional mutants derived from irradiated cultures of wild type *Escherichia coli* can be isolated. These mutants can also be isolated by the use of Penicillin as described by Davis and Lederberg. *Bacillus subtilis* mutants can be isolated by these techniques and by the Penicillin technique also, as described by Nester et al. Dipotassium and monopotassium phosphates provide buffering to the medium. Magnesium sulphate and ammonium sulphate are sources of ions that simulate metabolism.

### INSTRUCTION FOR USE

- Dissolve 10.6 grams in 990 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes. Add 10 ml of sterile 10% sterile Dextrose solution.
- Mix well and dispense as desired.

### QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: White to cream homogeneous free flowing powder.
Appearance of prepared medium	: Colourless clear solution in tubes.
pH (at 25°C)	: 7.0±0.2

### INTERPRETATION

Cultural characteristics observed after an incubation.



Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
<i>Escherichia coli</i>	13762	50-100	Luxuriant	35-37°C	18-24 Hours
<i>Escherichia coli</i>	23724	50-100	Luxuriant	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. Lederberg, 1950, Methods in Med. Res., 3:5.
2. Davis, 1949, Proc. Natl Acad. Sci, 35:1.
3. Nester, Schafer and Lederberg, 1963, Genetics, 48:529.

 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 EC REP Authorized Representative <small>MedMer GmbH Sachsenstr. 10 41123 Mönchengladbach, Germany</small>	 European Conformity	 QR Code	 Consults Instructions for Use	 Best Before

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

**\*For Lab Use Only**  
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