TM 696 – CASEIN YEAST MAGNESIUM AGAR (NZYM AGAR)

INTENDED USE
For cultivation of recombinant strains of *Escherichia coli.*

PRODUCT SUMMARY AND EXPLANATION
Bacterial transformation is the process by which bacterial cells take up naked DNA molecules. Bacterial cells to be transformed are rendered competent by their growth and preparation in selected media usually containing Mg^{2+} and/or Ca^{2+} ions. Casein Yeast Magnesium Agar is a modification of the formula described by Blattner et al used for cultivating recombinant strains of *Escherichia coli*.

COMPOSITION

Ingredients	Gms / Ltr
Tryptone	10.000
Yeast extract	5.000
Sodium chloride	5.000
Magnesium sulphate	0.980
Agar	15.000

PRINCIPLE
The medium constituents like tryptone and yeast extract supply the essential nutrients and cofactors required for excellent growth of recombinant strains of *Escherichia coli*. Sodium chloride maintains the osmotic balance of the medium. Magnesium sulphate is incorporated as a source of magnesium ion necessary in a variety of enzymatic reactions including DNA replication.

INSTRUCTION FOR USE
- Dissolve 35.98 grams in 1000 ml purified / distilled water.
- Heat gently to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes. Cool to 45- 50°C.
- Mix well and dispense as desired.

QUALITY CONTROL SPECIFICATIONS
Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Amber 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

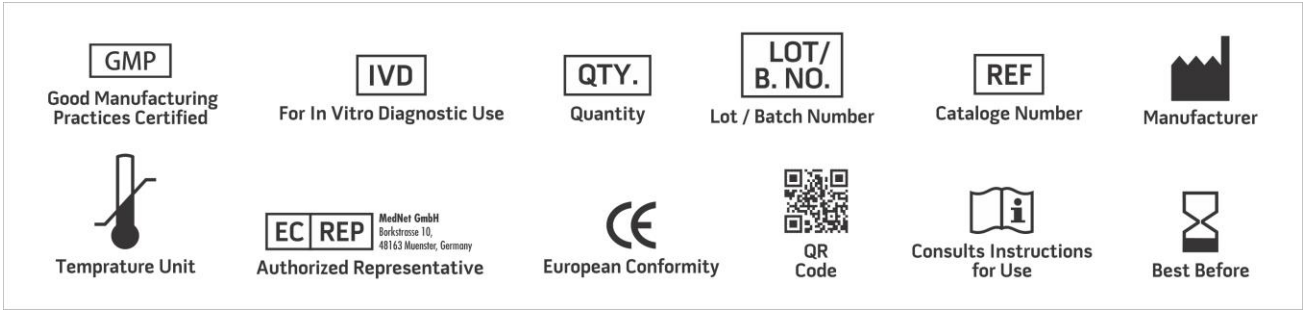
Escherichia coli	23724	50-100	Good-luxuriant	>=50%	35-37°C	18-24 Hours
Escherichia coli	53868	50-100	Good-luxuriant	>=50%	35-37°C	18-24 Hours

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. Alcamo E. I., 2001, Fundamentals of Microbiology, 6th Ed., Jones and Bartlett Publishers.
2. Williams A. S., Slatko E. B., McCarrey R. J., 2007, Laboratory Investigations in Molecular Biology, Jones and Bartlett Publishers.
3. Blattner F. R., Williams B. G., Blechl A. E., et al, 1977, Science, 196:161



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