CM 20386 – CASEIN MAGNESIUM BROTH

INTENDED USE
For cultivation of recombinant strains of E.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 Mg2 and/or Ca2+ ions. Casein Magnesium Broth, developed by Blattner et al is used for the cultivation of recombinant strains of Escherichia coli.

COMPOSITION

Ingredients	Gms / Ltr
Casein enzymic hydrolysate	10.000
Sodium chloride	5.000
Magnesium sulphate	0.940

PRINCIPLE
Casein enzymic hydrolysate supplies the essential nitrogenous nutrients for the growth of recombinant Escherichia coli. Sodium chloride maintains the osmotic balance of the medium. Magnesium sulphate is incorporated in the medium as magnesium ion, which is necessary for a variety of enzymatic reactions including DNA replication.

INSTRUCTION FOR USE
Dissolve 15.94grams in 1000 ml distilled water.
Heat if necessary to dissolve the medium completely.
Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
Mix well and dispense as desired.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Light yellow to beige homogeneous free flowing powder.
Appearance of prepared medium	: Amber coloured, clear solution without any precipitate in tubes.
pH (at 25°C)	: 7.0±0.2

INTERPRETATION
Culturalcharacteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
Escherichia coli	23724	50-100	Good-luxuriant	35-37°C	18-24 Hours

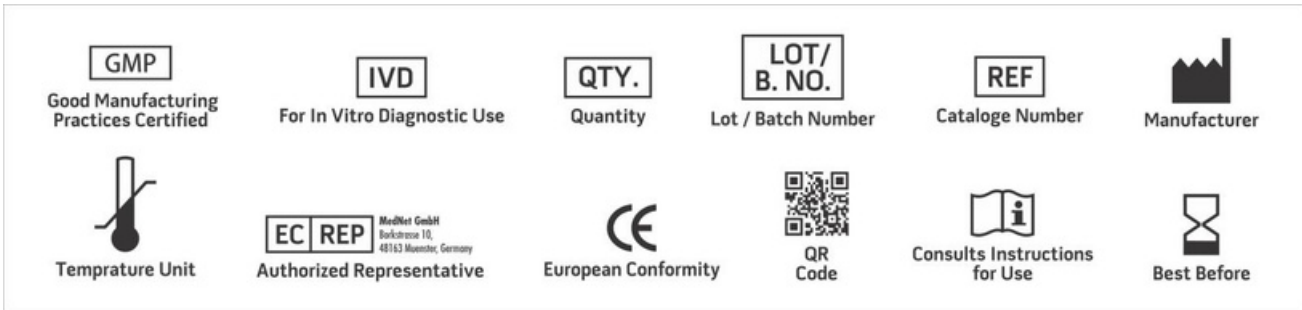
Escherichia coli	53868	50-100	Good-luxuriant	35-37°C	18-24 Hours

PACKAGING:
Inpacksizeof500 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
Afteruse,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 LabUse Only