TM 1044 - 5X MINIMUM SALTS

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

PRODUCT SUMMARY AND EXPLANATION
Escherichia coli is the most widely used microbial strain in genetic recombination studies. 5X Minimum Salt is recommended for use in cultivation of recombinant strains of *Escherichia coli*. It is prepared based on the formulation of Davis et al.

COMPOSITION

Ingredients	Gms / Ltr
Disodium phosphate	33.900
Potassium phosphate	15.000
Sodium chloride	2.500
Ammonium chloride	5.000

PRINCIPLE
Ammonium chloride is added as a nitrogen source. Glucose serves as the carbon and energy source while two phosphates buffer the medium against pH changes due to utilization of carbohydrate. Calcium and magnesium ions are required in a variety of enzymatic reactions including DNA replication. Sodium chloride maintains the osmotic balance.

INSTRUCTION FOR USE
- Dissolve 56.4 grams in 1000 ml distilled water.
- Heat if necessary to dissolve the medium completely.
- Dispense in 200 ml aliquots.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- To prepare minimal medium, add 200 ml sterile 5X Minimal Salts to 750 ml sterile distilled water.
- Aseptically add 20 ml filter sterilized 20% glucose solution and 2 ml sterile 0.1 M Magnesium sulphate (MgSO4) solution.
- If desired, add sterile 0.1 ml of 1.0 M Calcium chloride solution or amino acids as required.
- Mix well. Adjust final volume to 1000 ml.

QUALITY CONTROL SPECIFICATIONS
Appearance of Powder : White to cream homogeneous free flowing powder.
Appearance of prepared medium : Colourless clear solution without any precipitate.
pH (at 25°C) : 6.8±0.2

INTERPRETATION
Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period

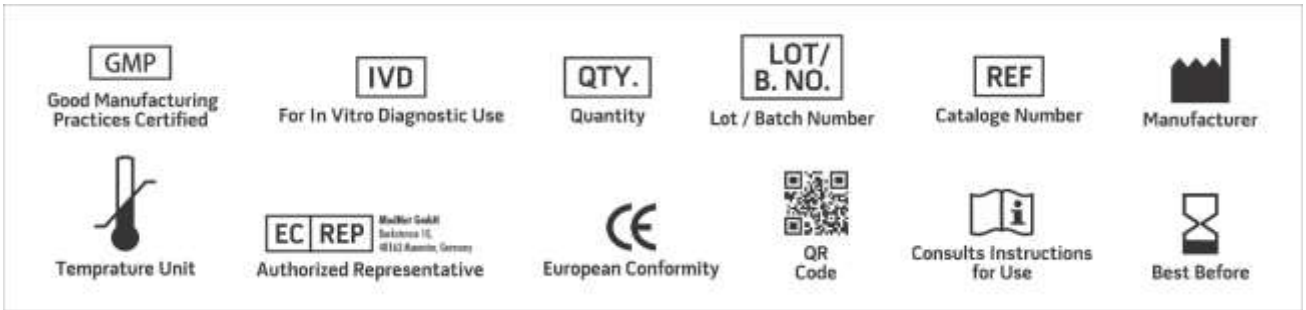
Escherichia coli	25922	50-100	Luxuriant	35-37°C	18-24 Hours

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. Davis L. G., Dibner M. D., and Battery J. F., 1986, Basic Methods in Molecular Biology, Elsevier, New York.
2. Sambrook J., Fritsch E. F. and Maniates T., 1989, Molecular Cloning: A Laboratory Manual, 2nd Ed., Cold Spring Harbour Laboratory, Cold Spring Harbour, N.Y.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.
***For Lab Use Only**
Revision: 08 Nov., 2019