Chaitanya Group Of Industries

ReadyMED®
Dehydrated Cell Culture Media

Technical Data Sheet

Minerals Modified Glutamate Broth Base (Double Strength) RDM-MMGB-01

Principle
Minerals Modified Glutamate Broth Base is formulated by Folpmers (1948), media consist of lactose , sodium formate, L-Cystine, L(-) Aspartic Acid, L(+) Arginine, thiamine, nicotinic acid, pantothenic acid, magnesium sulfate heptahydrate, ferric ammonium citrate, calcium chloride dehydrate, dipotassium phosphate and bromocresol purple. Lactose is the carbohydrate source. The addition of B-complex vitamins, certain amino acids and magnesium ions allows an increased rate of fermentation. Phosphate acts as a buffering agent. The addition of ammonium chloride allows increased gas production by the test organism. Bromocresol purple is present as a pH indicator.

Use: Recommended for the enumeration of *Escherichia coli* from water or waste water samples.

Contents*

Ingredients	**Gram/Litre**
Lactose	20.000
Sodium Formate	0.500
L-Cystine	0.040
L(-) Aspartic Acid	0.048
L(+) Arginine	0.040
Thiamine	0.002
Nicotinic Acid	0.002
Pantothenic Acid	0.002
Magnesium Sulfate	0.200
Ferric Ammonium Citrate	0.020
Calcium Chloride	0.020
Dipotassium Phosphate	1.800
Bromocresol Purple	0.020
pH at 25˚C	6.7 ±0.2

* Formula adjusted for optimum performance and parameters

Directions: Dissolve 22.7 g in 1000 ml of distilled water. Add 12.7 g or sodium glutamate and 5.0 g of ammonium chloride. Mix well with gentle heating to dissolve the ingredients completely. Distribute into tubes containing an inverted Durham's tube in each tube. Autoclave at 115-116°C for 10 minutes and inoculate test sample aseptically.

Specimens types analyzed
Pharmaceutical samples, clinical and non-clinical samples etc.

Precautions to be taken
These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation
The expected performance of the medium is liable to use as per the direction on the label when stored at

optimum conditions and within expiry date.

Quality Control

Appearance	beige to green colored free flowing, homogeneous powder
Reaction of 2.27% solution with 1.27 % sodium glutamate and 0.5% ammonium chloride.	6.7 ±0.2 at 25 ˚C
pH	6.50- 6.90
Color and clarity of ready medium	Purple colored clear opalescent solution
Growth Promotion properties	Best at ≤ 100 CFU at 32-37 ºC for 18-72 h
Indicative properties	Optimum at ≤ 100 CFU at 32-37 ºC for 18-48 h
Negative control	Performed using sterile distilled water

Different Microbial Response

Organism	Inoculum	Growth	Acid production	Gas production	Incubation
Escherichia coli (ATCC 8739)	50-100	Luxurious	Positive (yellow)	Positive	33-37 ℃, 18-48 h

Storage and Shelf Life

Hygroscopic; keep container tightly closed. Store in cool dry place.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. Atlas, R. M. (2005). *Handbook of media for environmental microbiology*. CRC press.
2. Burman N P, Oliver C W., (1952), *A comparative study of Folpmers' glutamic acid medium for the detection of bact. Coli in water.* Journal of Applied Microbiology, Vol. 15 (1), 7
3. *Difco Manual* (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.
4. Folpmers T., (1948), Ant. V. Leeuwenhoek, Journal of Microbiol. Serol., 14:58.
5. Rand, M. C., Arnold E. Greenberg, and Michael J. Taras, (1976), *Standard methods for the examination of water and wastewater*. Prepared and published jointly by American Public Health Association, American Water Works Association, and Water Pollution Control Federation.