OXFORD LAB FINE CHEM LLP
ISO 9001-2008 Certified Company

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Oxford
Range of
Laboratory Chemicals

TECHNICAL DATA SHEET

Minimal Glucose Agar for Ames Test

Principle

Minimal glucose agar for ames test is composed of glucose, dipotassium hydrogen phosphate, citric acid, magnesium sulphate, sodium hydrogen phosphate and agar. The glucose and citric acid as a carbon source. Dipotassium phosphate and sodium hydrogen phosphate provides buffering to the medium. Magnesium sulphate is source of ions and stimulate metabolism. Agar is a solidifying agent.

Use: To determine the mutagenic potential of chemicals and drugs.

Contents*

Ingredients	Gram/Litre
Glucose	20.000
Dipotassium hydrogen phosphate	10.000
Sodium hydrogen phosphate	3.500
Citric acid	2.000
Magnesium sulphate	0.200
Agar	13.000
pH at 25˚C	7.0 ± 0.2

*** Formula adjusted for optimum performance and parameters**

Directions: Dissolve 48.7 grams in 1000 ml distilled water. Boil to dissolve the medium completely and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 min, cool it to 42-45 °C and distribute aseptically in petri plates. Ensure complete solidification and inoculate test sample aseptically.

Specimens' types analyzed

Pharmaceutical samples, clinical and non-clinical samples etc.

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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	**Off white to beige colored, free flowing, homogeneous powder**
Reaction of 4.87% solution	**7.0 ± 0.2 at 25˚C**
pH	**6.80 - 7.20**
Gelling	**Firm comparable with 1.3% agar gel**
Color and clarity of ready medium	**Light to medium amber colored, slightly opalescent gel**
Growth Promotion properties	**Best at ≤ 100 CFU at 32-37ºC for 18-48 hours**
Indicative properties	**Optimum at ≤ 100 CFU at 32-37ºC for 18-24 hours**
Negative control	**Performed using sterile distilled water**

Different Microbial Response

Organism	Inoculum	Growth	Recovery	Incubation Temperature	Incubation period
Escherichia coli **(ATCC 13762)**	**50-100**	**Luxuriant**	**≥ 60%**	**33-37°C**	**18-24 hours**
Escherichia coli **(ATCC 23724)**	**50-100**	**Luxuriant**	**≥ 60%**	**33-37°C**	**18-24 hours**

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Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label. Note: Sterilize media immediately after reconstitution.

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. ***Difco Manual* (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.**
3. **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.**

Disclaimer:

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