OXFORD LAB FINE CHEM LLP
ISO 9001-2008 Certified Company

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TECHNICAL DATA SHEET

Motility Test Medium

Principle

Mobility test medium is used to detect the mobility of microorganisms. The media is composed of peptone, sodium chloride and agar. Peptone is a mixture of enzymically digested protein use to promote luxuriant growth of highly fastidious microorganisms and provides nitrogen and other necessary growth factors. The sodium chloride maintains osmatic equilibrium of the medium. For mobility detection the media contain less concentration of agar, which make it very soft and allow the mobile bacteria to migrate and causes cloudiness. The inoculum is stabbed into the center of a semisolid agar deep using a sterile inoculating needle. The motile bacteria diffuse into the media and growth extending out from the line of inoculation. The dynamic motile organisms grow throughout the entire medium, whereas sluggish organism show small areas or nodules that grow out from the line of inoculation. The non-motile bacteria only grow show the growth on stab line where they are inoculated.

Use: For the determination of bacterial motility.

Contents*

Ingredients	Gram/Litre
Peptone	10.0
Sodium chloride	5.0
Agar	5.0
pH at 25˚C	7.2 ±0.2

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

Directions: Dissolve 20.00 grams in 1000 ml distilled water. Boil to dissolve the medium completely and distribute aseptically in test tubes. Sterilize by autoclaving at 15 lbs pressure (121 °C) for 15 min, cool it to 42-45 °C and allow to solidify to forms semi solid butt. Ensure complete solidification and inoculate test sample stabbed into the center of a semisolid agar deep using a sterile inoculating needle aseptically.

Specimens' types analyzed

Pharmaceutical samples, clinical and non-clinical samples, food and dairy 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	**Beige colored free flowing, homogeneous powder**
Reaction of 2% solution	**7.2 ±0.2 at 25 ˚C**
pH	**7.00- 7.40**
Gelling	**Semi solid comparable with 0.5% agar gel**
Color and clarity of ready medium	**Light yellow to amber colored opalescent gel**
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	Motility	Incubation
***Escherichia coli* (ATCC 8739)**	**50-100**	**Luxurious**	**Motile, growth away from stab line causing cloudiness**	**3337 ºC, 18-48 h**
***Staphylococcus aureus* (ATCC25923)**	**50-100**	**Luxurious**	**Non-Motile, growth along the stab line**	**33-37 ºC, 18-48 h**

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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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