

TECHNICAL DATA SHEET

Jensen's Medium (Jensen's Agar)

Principle

Jensens agar is composed of sucrose, dipotassium phosphate, magnesium sulphate, sodium chloride, ferrous sulphate, sodium molybdate, calcium carbonate and agar. Sucrose acts as the energy source. Dipotassium phosphate acts as buffering agent. Sodium molybdate increase nitrogen fixation. Sodium chloride maintains osmotic equilibrium. Calcium stimulates nodulation. Ferrous sulphate and calcium carbonate are required for bacterial growth and its metabolism. Agar is used as a solidifying agent.

Use: For the detection and cultivation of nitrogen fixing bacteria.

Contents*

Ingredients	Gram/Liter
Sucrose	20.000
Dipotassium Phosphate	1.000
Magnesium Sulphate	0.500
Sodium Chloride	0.500
Ferrous Sulphate	0.100
Sodium Molybdate	0.005
Calcium Carbonate	2.000
Agar	15.000
pH at 25°C	7.20 to 7.80

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

Directions: Dissolve 39.10 grams in 1000 ml distilled water. Boil to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121 °C) for 15 min, cool it to 42-45 °C and distribute in desired. Allow to solidify and inoculate test sample aseptically.

Specimens' types analyzed
Soil and water samples etc.

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ISO 9001-2008 Certified Company

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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 colored free flowing, homogeneous powder
Reaction of 3.91% solution	7.20 to 7.80 at 25°C
pH	7.20 – 7.80
Gelling	Firm comparable with 1.5% agar gel
Color and clarity of ready medium	Off white colored opalescent gel
Growth Promotion properties	Best at ≤ 100 CFU at $30 \pm 2^\circ\text{C}$ for 5-8 days
Indicative properties	Optimum at ≤ 100 CFU at $30 \pm 2^\circ\text{C}$ for 5-8 days
Negative control	Performed using sterile distilled water

Different Microbial Response: Cultural characteristics observed after incubation at $30 \pm 2^\circ\text{C}$ for 5-8 days. Inoculum 50-100 CFU.

Organism	ATCC	Inoculum (CFU)	Growth	Recovery
<i>Rhizobium leguminosarum</i>	10004	50-100	Luxuriant	$\geq 70\%$
<i>Rhizobium oryzae</i>	9363	50-100	Luxuriant	$\geq 70\%$

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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.
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4. Subba Rao N. S., 1977, In: Soil Microorganisms and Plant Growth, Oxford and IBH Publishing Co., New Delhi, Pages254-255.
5. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition

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