

TECHNICAL DATA SHEET

Jenson's Broth

Principle

Jensens Broth is composed of sucrose, dipotassium phosphate, magnesium sulphate, sodium chloride, ferrous sulphate, sodium molybdate, calcium carbonate. 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.

Use: For detection and cultivation of nitrogen fixing bacteria.

Contents*

Ingredients	Gram/Litre
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
pH at 25°C	7.20to 7.80

* Formula adjusted for optimum performance and parameters

Directions: Dissolve 24.10 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 inoculate test sample aseptically.

Specimens' types analyzed

Soil and water 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 colored free flowing, homogeneous powder
Reaction of 2.41% solution	7.20 to 7.80 at 25 °C
pH	7.00- 8.00
Color and clarity of ready medium	Milky white colored opalescent solution with slight precipitate
Growth Promotion properties	Best at ≤ 100 CFU at 25-30°C for 5-8 days
Indicative properties	Optimum at ≤ 100 CFU at 25-30°C for 5-8 days
Negative control	Performed using sterile distilled water

Different Microbial Response: Cultural characteristics observed after incubation at 25-30°C for 5-8 days.

Organism	ATCC	Inoculum (50-100 CFU)	Growth
<i>Rhizobium leguminosarum</i>	10004	50-100	Luxuriant

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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. Jensen. H. L., 1942, Pro Line Soc. N.S.W., 57,205-212
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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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