Jensen's Broth

Intended Use
Jensen's Broth is used for detection and cultivation of nitrogen fixing bacteria.

Summary
Nitrogen fixing bacteria are capable of taking gaseous nitrogen and combining it with hydrogen to make ammonia. The plant can use fixed nitrogen for growth, Thus nitrogen fixing bacteria increases the soil productivity. To isolate the nitrogen fixing bacteria nitrogen free Jensen's Broth has been formulated and used.

Principle
Sucrose serves as energy source. Different salts support the bacterial growth. Sodium chloride maintains the osmotic equilibrium of the medium.

Formula*

Ingredients	g/L
Sucrose	20.0
Calcium carbonate	2.0
Dipotassium phosphate	1.0
Sodium chloride	0.5
Ferrous sulphate	0.1
Sodium molybdate	0.005
Magnesium Sulphate	0.5
Final pH (at 25°C)	7.5 ± 0.2

*Adjusted to suit performance parameters

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2ºC-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure.
The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions
1. Suspend 24.10 g of the powder in 1000 mL purified / distilled water.
2. Mix thoroughly.
3. Boil with frequent agitation to dissolve the powder completely. Do not overheat.
4. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.

Quality Control
Dehydrated Appearance: White to Cream coloured, homogenous, free flowing powder.
Prepared Appearance: Cream to white coloured, opalescent solution with a slight precipitation.
Cultural Response: Cultural Response was observed after an incubation at 25°C-30°C for up to 8 days and subsequent recovery on Jensen's Medium/Yeast Mannitol Agar.

Organism (ATCC)	Growth
Rhizobium meliloti (9930)	Good
Azotobacter chroococcum (NCIM 2452)	Good
Azotobacter vinelandii (NCIM 2821)	Good

Interpretation of results
Refer to appropriate references and procedures for results.

Performance and Evaluation
Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty
This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. Vincent J.M. 1970. A manual for practical study of root-nodule bacteria p 164 IBP Handbook. Backwell Scientific Publications. Oxford.
2. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201100010500	Dehydrated Culture Media	500 g
201100012500	Dehydrated Culture Media	2.5 k