

TM 746 – JENSEN'S BROTH

INTENDED USE

For detection and cultivation of nitrogen fixing bacteria.

PRODUCT SUMMARY AND EXPLANATION

Nitrogen-fixing organisms are free-living bacteria, which grow well on a nitrogen-free medium. These bacteria utilize atmospheric nitrogen gas for their cell protein synthesis. This cell protein is then mineralized in soil after the death of the cells thereby contributing towards the nitrogen availability of the crop plants. Nitrogen fixing bacteria enter into symbiosis only with leguminous plants, by infecting their roots and forming nodules on them. Jensens Broth is formulated according to Jensen and is recommended for detection and cultivation of nitrogen fixing bacteria.

COMPOSITION

Ingredients	Gms / Ltr
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

PRINCIPLE

The medium consists of Sucrose which acts as the energy source. Sodium molybdate in the media increases the fixation of nitrogen. Sodium chloride maintains osmotic equilibrium of the media. Calcium stimulates nodulation when present as chloride or sulphate.

INSTRUCTION FOR USE

- Dissolve 24.1 grams in 1000 ml purified / distilled water.
 - Heat just to boiling. Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
 - Mix well and dispense as desired.
- Note: Due to presence of calcium carbonate, the medium forms opalescent solution with white precipitate.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : White to cream homogeneous free flowing powder.
Appearance of prepared medium : Cream coloured, slightly opalescent solution with slight precipitate in tubes.
pH (at 25°C) : 7.0 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.



Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
<i>Rhizopus oryzae</i>	9363	50-100	Luxuriant	25-30°C	Upto 8 Days
<i>Rhizobium leguminosarum</i>	10004	50-100	Luxuriant	25-30°C	Upto 8 Days
<i>Rhizobium meliloti</i>	9930	50-100	Luxuriant	25-30°C	Upto 8 Days

PACKAGING:

In pack size of 100 gm and 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.










Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Subba Rao N. S., 1977, In: Soil Microorganisms and Plant Growth, Oxford and IBH Publishing Co., New Delhi, Pages 254-255.
2. Jensen. H. L., 1942, Pro Line Soc. N.S.W., 57,205-212.
3. Ranganayaki S., Mohan C., Ally Z., 1981; 21 (8): 607-10.

 GMP Good Manufacturing Practices Certified	 Best Before	 QTY. Quantity	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 LOT/ B. NO. Lot / Batch Number	 Consults Instructions for Use	 QR Code	

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**
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