TM 134 – JENSEN SEEDLING AGAR

INTENDED USE

For germinating seeds of leguminous plants for studying nodulating ability of *Rhizobium* isolates.

PRODUCT SUMMARY AND EXPLANATION

Rhizobium is a soil bacterium that has great environmental and agricultural importance because of their symbiotic association with leguminous plants. They are responsible for most of the atmospheric nitrogen fixed on the earth. Rhizobium is a free-living bacterium, which grow well on a nitrogen free medium. These bacteria utilize atmospheric nitrogen gas for their cell protein synthesis. This cell protein is then mineralised in soil after the death of the cells thereby contributing towards the nitrogen availability to the crop plants. Jensen Seedling Agar, a nitrogen free medium, is used for germinating seeds of leguminous plants while studying the nodulating ability of *Rhizobium* species.

COMPOSITION

Ingredients	Gms / Ltr
Calcium phosphate	1.000
Dipotassium hydrogen phosphate	0.200
Magnesium sulphate	0.200
Sodium chloride	0.200
Ferric chloride	0.100
Agar	15.000

PRINCIPLE

The medium consists of Calcium which stimulates nodulation when present as chloride or sulphate. Sodium chloride maintains the osmotic balance of the medium. Dipotassium phosphates provide buffering to the medium. Magnesium sulphate and ferric chloride are sources of ions that simulate metabolism.

INSTRUCTION FOR USE

- Dissolve 16.7 grams in 1000 ml purified / distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 45-50°C. Mix well and dispense as desired.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Cream to beige homogeneous free flowing powder.
Appearance of prepared medium	: Light cream coloured, clear to slightly opalescent gel with a slight precipitate.
pH (at 25°C)	: 7.0 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
Rhizobium japonicum	10324	50-100	Luxuriant	>=70%	25°C	7 Days
Rhizobium leguminosarum	10004	50-100	Luxuriant	>=70%	25°C	7 Days
Rhizobium meliloti	9930	50-100	Luxuriant	>=70%	25°C	7 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

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3. Jensen H. L., Nitrogen fixation in leguminous plants. I., Proc. Int. Soc. NSW, 1942; 66:68 - 108.
4. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
5. Subba Rao N. S., 1977, In: Soil Microorganisms and Plant Growth, Oxford and IBH Publishing Co., New Delhi, Pages 254-255.

GMP
Good Manufacturing Practices Certified

Best Before

QTY.
Quantity

REF
Catalogue Number

Manufacturer

Temprature 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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