

TM 922 - YEAST MANNITOL AGAR W/ CONGO RED

INTENDED USE

for cultivation of soil microorganisms like *Rhizobium* species.

PRODUCT SUMMARY AND EXPLANATION

Rhizobium can fix atmospheric nitrogen only in root nodules of legumes and that too when it is in the bacteroid stage of its life cycle. It possesses the entire complement of genes for nitrogen fixation, which are normally latent and become active only under special conditions. *Rhizobium* makes nitrogen available to the plant and in turn, the bacteria derive nutrients from the tissues of the plants. Yeast Mannitol Agar with Congo Red is used for the cultivation of *Rhizobium* species and for studying root nodulation.

COMPOSITION

Ingredients	Gms / Ltr
Yeast extract	1.000
Mannitol	10.000
Dipotassium phosphate	0.500
Magnesium sulphate	0.200
Sodium chloride	0.100
Congo red	0.025
Agar	20.000

PRINCIPLE

Yeast extract serves as a good source of readily available amino acids, vitamin B complex and accessory growth factors for Rhizobia. It also poises the oxidation-reduction potential of medium in the range favorable for Rhizobia and serves as hydrogen donor in respiratory process. Mannitol is the fermentable sugar alcohol source. Magnesium provides cations essential for the growth of Rhizobia. Congo red inhibits penicillin-susceptible strains. Colonies of Rhizobia stand out as white, translucent, glistening and elevated, with entire margins.

INSTRUCTION FOR USE

- Dissolve 31.80 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Light yellow to pink homogeneous free flowing powder.
Appearance of prepared medium pH (at 25°C)	: Orange coloured clear to slightly opalescent gel forms in Petri plates. : 6.8±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.



Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Color of the colony	Incubation Temperature	Incubation Period
<i>Rhizobium japonicum</i>	10324	50-100	Luxuriant	>=70%	Pink	25-30°C	up to 2-5 days
<i>Rhizobium meliloti</i>	9930	50-100	Luxuriant	>=70%	Pink	25-30°C	up to 2-5 days

PACKAGING:

In pack size of 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.







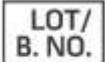


Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

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

REFERENCES

1. Pelczar M. J. Jr., Reid R. D, Chan E. C. S., 1977, Microbiology, Tata McGraw-Hill Publishing company Ltd, New Delhi.
2. Subba Rao N. S., 1977, Soil Microorganisms and Plant Growth, Oxford and IBH Publishing Co.
3. Allen E. K. and Allen O. N., 1950, Bact. Revs., 14:273.

 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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