TM 610 - YEAST LACTOSE AGAR

INTENDED USE
For cultivation of soil microorganisms like *Rhizobium* species.

PRODUCT SUMMARY AND EXPLANATION
Symbiotic nitrogen fixation is accomplished by bacteria of the genus *Rhizobium* in association with legumes (plants that bear seeds in pods). These bacteria infect the root system of the legumes and further invade the host plant cells via an infection thread. Some of the cells of the plant are thus infected causing cell enlargement and an increased rate of cell division, leading to the formation of abnormal growth (nodules) on the root system. The legume, the bacteria and the nodule together constitute the nitrogen fixing system. The bacteria make nitrogen available to the plant, and in turn the bacteria derive nutrients from the tissues of the plant. Yeast Lactose Agar is used for cultivation of soil microorganisms such as *Rhizobium* species.

COMPOSITION

Ingredients	Gms / Ltr
Yeast extract	1.000
Lactose	10.000
Dipotassium hydrogen phosphate	0.500
Magnesium sulphate	0.200
Sodium chloride	0.100
Agar	15.000

PRINCIPLE
Yeast extract serves as a good source of readily available amino acids, including vitamin B complex and accessory growth factors. It also poises the oxidation-reduction potential of medium in the range favorable for Rhizobia and serves as hydrogen donor in respiratory process. Lactose is the fermentable carbohydrate source. Magnesium provides cations essential for the growth of Rhizobia.

INSTRUCTION FOR USE
- Dissolve 26.8 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Dispense as desired. Sterilize by steaming for 30 minutes on two consecutive days.
- Confirm sterility by leaving it at room temperature (30 ± 2°C) for 3-4 days.
- Alternatively, the medium can be sterilized by autoclaving at 15 psi pressure (121°C) for 15 minutes.

QUALITY CONTROL SPECIFICATIONS
Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Light yellow coloured opalescent gel forms in Petri plates.
pH (at 25°C) : 6.8±0.2

INTERPRETATION
Cultural characteristics observed after an incubation.

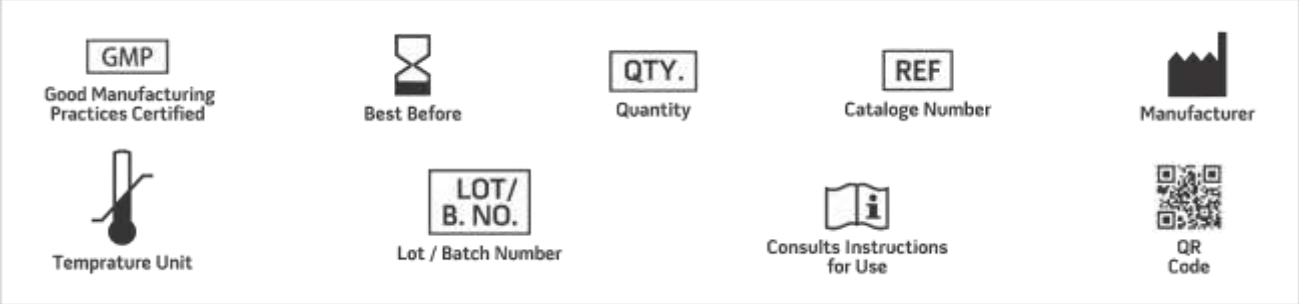
Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
Rhizobium japonicum	10324	50-100	Luxuriant	>=70%	25-30°C	upto 2-5 days
Rhizobium meliloti	9930	50-100	Luxuriant	>=70%	25-30°C	upto 2-5 days

PACKAGING:
In pack size of 100 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. Bernaerts M. J. and De Ley J., 1963, Nature, Lond, 197, 406-407.
3. Subba Rao N. S., 1977, Soil Microorganisms and Plant Growth. Oxford and IBH Publishing Co.4. Allen E. K. and Allen O. N., 1950, Bact. Revs., 14:273.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.
***For Lab Use Only**
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