

TM 1076 - SM SELECTIVE AGAR BASE

INTENDED USE

For isolation and cultivation of *Pseudomonas solanacearum*.

PRODUCT SUMMARY AND EXPLANATION

Phytopathogenic pseudomonads are a very diverse group of bacteria with respect to their genetics, ecology and the kinds of disease they cause. Some of the world's most serious bacterial diseases are caused by pseudomonads such as *Pseudomonas solanacearum*.

The bacterium *P. solanacearum* is the causative agent of bacterial wilt in plants and is the most important and widely spread bacterial diseases of crops in the tropic, subtropics and warm temperate regions of the world. SM Selective Agar Base is recommended for isolation and cultivation of *P. solanacearum*.

COMPOSITION

Ingredients	Gms / Ltr
Mannitol	2.500
L-Glutamic acid	1.000
Magnesium sulphate, 7H ₂ O	0.160
Manganese sulphate, H ₂ O	0.310mg
Potassium phosphate, monobasic	0.027mg
Zinc sulphate, 7H ₂ O	0.550mg
Ferric ammonium sulphate, 6H ₂ O	0.090mg
Copper sulphate, 5H ₂ O	0.010mg
Calcium sulphate, 5H ₂ O	0.010mg
Phosphoric acid	0.005mg
Potassium iodide	0.000006mg
Agar	15.000

PRINCIPLE

P. solanacearum is a plant pathogen and utilizes mannitol as carbon source. The various salts added in trace amounts enhance the growth of *P. solanacearum*, while antibiotic solution serves to inhibit contaminating heterotrophic microflora from samples. The dye 2, 3, 5-triphenyl tetrazolium chloride (TTC) is used as indicator of oxidation-reduction state of the medium. *P. solanacearum* being highly oxidative, its colony takes up the pink colour of the oxidized dye.

INSTRUCTION FOR USE

- Dissolve 18.66 grams in 990 ml distilled water. Mix thoroughly
- 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. Aseptically add sterile rehydrated contents of 1 vial of SM Selective Supplement and 10 ml of TTC Solution, 1%.
- Mix well and pour into sterile Petri plates or as desired.

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) : 7.0±0.2

INTERPRETATION

Cultural characteristics observed after an incubation with added SM Selective Supplement and 10ml of TTC Solution 1%.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
<i>Pseudomonas aeruginosa</i>	27853	50-100	None-poor	0-10%	30°C	48 Hours
<i>Pseudomonas solanacearum</i>	11696	50-100	Good-luxuriant	≥50%	30°C	48 Hours

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.







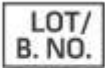


Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

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

REFERENCES

- Balows A., Truper H. G., Dworkin M., Harder W., Schleifer K. H., (Ed.), The Prokaryotes, 1992, 2nd Edition, Vol. III, Springer-Verlag.
- Hayward A. C., 1991, Biology and epidemiology of bacterial wilt caused by *Pseudomonas solanacearum*, Ann. Rev. Phytopathol., 29:65-87.
- Atlas R. M., Handbook of Microbiological Media, 1997, 2nd Edition, Edited by Lawrence C. Parks.

 Good Manufacturing Practices Certified	 Best Before	 Quantity	 Catalogue Number	 Manufacturer
 Temperature Unit	 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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