PHM011 **Phyto Pst Agar Base**

Semi-selective medium for the detection of *Pseudomonas syringae* pv.*tomato* on seeds of tomato.

Composition **:

Ingredients	**Grams/Litre**
Proteose peptone	20.00
Di-potassium hydrogen phosphate	1.50
Magnesium sulphate anhydrous	0.73
Agar	15.00

Final pH (at 25°C) 7.5
**Formula adj usted standard to suit the performance parameter

Direction.:

Suspend 37.2 grams in 960 ml distilled water. Add 30 ml of 50% glycerol .Dissolve 1.5 g boric acid in 10 ml distilled water. Sterilize the solutions separately by autoclaving at 15 lbs pressure(121°C) for 15 minutes .Cool to 45-50 °C and aseptically add the rehydrated contents of one vial of CCTP supplement (PHS010) Mix well and pour into Petri plate .

Principle and Interpretation

Bacterial speck of tomatoes is caused by *Pseudomonas syringae pv. tomato*. This bacterium is widespread and is often isolated from plant roots and soil particles since this bacterium is seedborne.. It has been associated with different plants near tomato fields, where it survives as a saprophyte. Recently it was shown that these bacteria may multiply at the base of leaf hairs on healthy tomato leaves and later cause disease. The disease is most serious in cold with high relative humidity.

The foliar symptoms of speck consist of small black lesions, often with a discrete yellow halo. Speck seems to curl the leaves more severely than spot. Bacterial speck lesions are slightly raised, but are generally much smaller. Bacterial speck lesions are very superficial and do not crack or become scaly as in bacterial spot (2).

Proteose peptone provide nitrogenous compounds, carbon, vitamin B complex and trace ingredients. The inorganic phosphates in the medium serve as buffers. The media becomes selective with the addition of CCTP Supplement (PHS010).

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Quality Control :
Light yellow coloured, homogeneous, free flowing powder.
Gelling
Firm, comparable with 1.5% Agar gel.
Colour and Clarity of prepared medium
Yellow coloured, opalescent gel forms in Petri plates
Reaction
Reaction of 3.72% w/v aqueous solution is pH 7.5
Cultural Response:

Cultural characteristics observed after an incubation at 30-32°C for 5-6 days with added CCTP supplement (PHS010) .

Organism (ATCC)	Growth	Colour of the Colony
Pseudomonas syringae pv.*tomato*	luxuriant	small, flat, pink coloured
Escherichia coli (25922)	inhibited	-
Staphylococcus aureus (25923)	inhibited	-

References:

1. Ken Pernezny, professor, Plant Pathology Department, Everglades Research and Education Center, Belle Glade, FL; Shouan Zhang, assistant professor, Plant Pathology Department, Tropical Research and Education Center, Homestead; Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL 32611.

2. Zitter T. A. Bacterial Diseases of Tomato Vegetable crops.

Storage and Shelf-life :
Store below 30°C and the prepared medium at 2 - 8°C. Use before expiry date on the label.

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