

## Technical Information

### Phyto Peptone - Sucrose Agar

**Product Code: PHM1026**

**Application:** Semi selective Agar medium for detection of *Xanthomonas axonopodis* pv. *malvacearum* in naturally infected cotton seed.

### Composition\*\*

Ingredients	Grams/Litre
Peptone	5.000
Ferrous sulphate	0.500
Disodium hydrogen phosphate	2.000
Calcium nitrate	0.500
Sucrose	20.000
Agar	15.000
Final pH ( at 25°C)	6.8±0.2

\*\*Formula adjusted, standardized to suit performance parameters

### Principle And Interpretation

*Xanthomonas* species can cause bacterial spots and blights of leaves, stems, and fruits on a wide variety of plant species (1). Pathogenic species show high degrees of specificity and some are split into multiple pathovars, a species designation based on host specificity. Angular leaf spot caused by *Xanthomonas axonopodis* pv. *malvacearum* (Xam) is one of the most important diseases of tetraploid cotton (*Gossypium hirsutum* L. and *G. barbadense* L.) in many countries which causes heavy yield losses. Cotton seed is considered to be an important transmission vehicle of Xam and a source of primary inoculum (2). Phyto Peptone Sucrose Agar is a semi-selective Agar developed for detection of *Xanthomonas axonopodis* pv. *malvacearum* (Xam)(3). The media contains peptone, which is carbon, nitrogen and sulphur source. Sucrose is a source of carbohydrate. Calcium nitrate serves as inorganic nitrogen source and other inorganic salts supply the necessary growth requirements.

### Directions

Suspend 43 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Aseptically add the rehydrated contents of one vial of PSA Supplement (PHS1018). Mix well and pour into sterile Petri plates.

### Quality Control

**Appearance:**

Cream to yellow coloured, homogeneous, free flowing powder.

**Gelling:**

Firm, comparable with 1.5% Agar gel.

**Colour and Clarity of prepared medium:**

Yellow coloured clear to slightly opalescent gel forms in Petri plates

**pH**

6.60-7.00

**Cultural Response:**

PHM1026: Cultural characteristics observed after an incubation at 30-32°C for 5-6 days with added PSA supplement (PHS1018).

**Organism (ATCC)**

*Xanthomonas axonopodis* pv. *malvacearum*

**Growth**

good

### Storage and Shelf Life

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

### Further Reading

1. Boch J, Bonas U (September 2010). "XanthomonasAvrBs3 Family-Type III Effectors: Discovery and Function". Annual Review of Phytopathology 48: 419–36.
2. Brinkerhoff,L.A.& Hunter,R.E. Internally infected seed as a source of inoculum for the primary cycle of bacterial blight of cotton. Phytopathology 53:1397-1401.1963.
3. Bomfeti,C. & Bolognini,V.,Fitopatologia Brasileira 30:489-496.2005.

### Disclaimer :

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