PHM002 **Phyto Buffered Starch Agar Base**

Selective medium for the detection of *Xanthomonas campestris pv.*campestris and *Xanthomonas campestris pv.* armoraciae in brassica.

Composition **:

Ingradients	**Grams/Litre**
Yeast extract	0.10
Soluble starch	25.00
Di-potassium hydrogen phosphate	0.80
Potassium nitrate	0.50
Magnesium sulphate anhydrous	0.488
Methyl green	0.015
Agar	15.00

Final pH (at 25°C) 6.8

**Formula adusted standard to suit the performance parameter

Direction.:

Suspend 42.21 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 and aseptically add the rehydrated contents of one vial of NMPT supplement (PHS002). Mix well and pour into Petri plates .
Note : Store plates for 4 days at 4°C to improve visibility of starch hydrolysis.

Principle and Interpretation

This medium was used to identify the strain causing black rot in brassica. This medium is formulated as developed by D. Fieldhouse and M. Sasser . This medium is sensitive medium for the growth of *Xanthomonas campestris* pv. *campestris* and *Xanthomonas campestris pv. armoraciae*, the appearance of this colonies are greenish blue, translucent, mucoid and gives starch hydrolysis (1).
Yeast extract serves as a nutritional factor. Phosphates buffer the medium. Potassium nitrate serves a nitrogen source. Starch hydrolysis is detected by a visible zone of hydrolysis. The antibiotics in the supplement serves a selective agent.

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Quality Control :

Appearance :

Light yellow to light green coloured, homogeneous, free flowing powder.

Gelling :

Firm, comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium :

Yellow coloured, with greenish tinge opalescent gel forms in Petri plates.

Cultural Response :

Cultural characteristics observed with added NMPT Supplement, after an incubation at 30-32°C for 5-6 days.

Organism (ATCC)	Growth	Colony characteristics	Starch hydrolysis
Xanthomonas campestris pv. *campestris*	luxuriant	pale green mucoid	+
Xanthomonas campestris pv. *armoraciae*	luxuriant	pale green mucoid	+
Saccharomyces cerevisiae (9763)	inhibited	-	-

Key: Small zone surrounded the colony

Reference :

1.Yuen, G.Y.,Alvarez, A.M., Benedict,A.A., and Trotter, K.J. 1987. Use of monoclonal antibodies to monitor the dissemination of *Xanthomonas campestris pv.campestris.* Phytopathology 77:366-370

Storage and Shelf-life :

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

CE