PHM021 **Phyto Xcv Agar Base**

Semi-selective medium for the detection of *Xanthomonas campestris* pv. vesicatoria and *Xanthomonas vesicatoria* on seeds of pepper and tomato.

Composition **:

Ingredients	**Grams/Litre**
Peptone	10.00
Potassium bromide	10.00
Boric acid	0.10
Calcium chloride anhydrous	0.25
Agar	15.00

**Formula adjusted standard to suit the performance parameter

Direction:

Suspend 35.35 grams in 990 ml distilled water containing 10 ml of Tween 80. 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 CCFT Supplement (PHS017). Mix well and pour into sterile Petri plates.

Principle and Interpretation

Xanthomonas campestris pv. *vesicatoria* (Xcv) is the causal agent of bacterial spot disease on pepper and tomato and *X. vesicatoria* survives from one crop to another mainly on seed, but also in infected debris, e.g. stalks. It may be able to survive in the soil to some extent, possibly in the rhizosphere of non-host plants. Unfortunately, these species are not distinguished pathogenically. Until simple techniques are available to characterize these species, *Xanthomonas* strains causing bacterial spot on pepper and/or tomato will probably continue to be referred as *Xanthomonas campestris* pv. *vesicatoria* (Xcv) by seed industry. Hence medium is proposed for the detection of *Xanthomonas campestris* pv. vesicatoria and *Xanthomonas vesicatoria* on seeds of pepper and tomato (1). It is suggested by McGuire for the isolation of *Xanthomonas campestris* pv *vesicatoria* from soil and plant material (2).

Medium contains peptone which is which is carbon, nitrogen compounds including essential amino acids, vitamins for survival of organisms. Tween 80 is a mixture of oleic esters and supplies fatty acids required for metabolism of organism. Boric acid present in the medium serve as a selective medium.

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Quality Control :

Appearance of Powder:

Cream to yellow coloured, homogeneous, free flowing powder.

Gelling

Firm, comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium

Yellow coloured slightly opalescent gel forms in Petri plates

Cultural Response:

Cultural characteristics observed with added CCFT Supplement (PHS017), after an incubation at 25-30°C for 3-7 days.

Organism (ATCC)	Growth	Colour of the Colony
Xanthomonas campestris pv. vesicatoria	luxuriant	yellow, slightly mucoid mounded (white crystalline halo around the colony & round)
Xanthomonas vesicatoria	luxuriant	yellow, slightly mucoid mounded & round
Escherichia coli (25922)	inhibited	-
Staphylococcus aureus (25923)	inhibited	-

References:

1. Hibberd A.M., M.J. Bassett and R.E. Stall. 1987. Allelism tests of three dominant genes for hypersensitive resistance to bacterial spot of pepper. *Phytopathology* 77: 1304-1307.

2. McGuire,R.G., Jones,J.B. and Sasser, M.1986. Tween media for semiselective isolation of Xanthomonas campestris pv vesicatoria from soil and plant material. Plant Dis. 70:887-891.

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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