

Technical Information

Phyto Semiselective Agar Base

Product Code: PHM1012

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

Composition**

Ingredients	Grams/Litre
Soya peptone	2.00
Tryptone	2.00
Glucose anhydrous	1.00
L-glutamine	6.00
L-histidine	1.00
Di-ammonium hydrogen phosphate	0.80
Potassium dihydrogen phosphate	1.00
Magnesium sulphate anhydrous	0.20
Agar	15.00
Total	29 gm/liter

**Formula adjusted standard to suit the performance parameter

Principle And Interpretation

Bacterial spot is caused by *Xanthomonas campestris pv. vesicatoria*. A semi-selective medium was developed by Sijam (1) wherein *Xanthomonas campestris pv.vesicatoria* was distinguished from its other pathovars by the formation of clear zone around the colony after 2-3 days of incubation. Soya peptone and tryptone supplies nitrogenous compounds and other nutrients to the organisms. Glucose is the carbohydrate source. L-glutamine and L-histidine supplies amino acid. The phosphates in the medium serves as a buffer. Bacterial and fungal contaminants were inhibited by the antibiotic CCFTNB supplement (PHS1011). 5-fluorouracil in the medium is affective in eliminating fluorescent *pseudomonas*

Directions

Suspend 29.0 grams in 1000 ml distilled water containing 10 ml Tween 80. Heat to boiling to dissolve the medium completely. Sterilize the medium 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 CCFTNB supplement (PHS1011). Mix well and pour into 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, opalescent gel forms in Petri plates

Cultural Response:

Cultural characteristics observed after an incubation at 30-32°C for 5-6 days with added CCFTNB supplement (PHS1011).

Organism (ATCC)	Growth	Colony colour
<i>Xanthomonas campestris</i> pv.vesicatoria	luxuriant	yellow, mucoid, round
<i>Escherichia coli</i> (25922)	inhibited	-
<i>Staphylococcus aureus</i> (25923)	inhibited	-
<i>Pseudomonas aeruginosa</i> (27853)	inhibited	-
<i>Candida albicans</i> (10231)	inhibited	-

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 Sijam, K., Chang, C.J. and Gitaitis, R.D. 1992. A medium for differentiation of tomato and pepper strains of *Xanthomonas campestris* pv. vesicatoria. *Canad . J. Plant Pathol.* 90:208-213

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