Technical Information

Phyto XcCar Agar Base

Product Code: PHM1020

Application: Semi Selective medium for the detection of *Xanthomonas campestris pv. carotae* in carrot.

Composition**

Ingredients	Grams/Litre
Sodium dihydrogen phosphate	0.900
Di-potassium hydrogen phosphate	3.00
Magnesium sulphate, anhydrous	0.15
Ammonium chloride	1.0
Agar	15
Final pH (at 25°C)	6.4
Total	20.05 gm/liter

**Formula adjusted standard to suit the performance parameter

Principle And Interpretation

Bacterial leaf blight of carrot *(Daucus carota subsp. sativus),* caused by *Xanthomonas campestris pv. carotae*, is a common problem wherever carrots are grown (1). *X. campestris pv. carotae* needed to give rise to bacterial blight in sprinkler-irrigated carrots (2). Once established, this disease is difficult to manage. Yet, disease prevention also is difficult because *X campestris pv. carotae* is seedborne and hot water seed treatments may not entirely eradicate the pathogen. To monitor populations of *X. campestris pv. carotae* on plants, this media has developed. This medium is formulated as per the formulation of MD5A by Cubeta and Kuan, 1986 (3). Phyto XcCar Agar Base is semi selective medium for the detection of *Xanthomonas campesris pv. carota* in carrot. Medium contains all inorganic components, out of which phosphates present in the medium serve as buffers. Ammonium chloride and magnesium sulphate are trace element, provides nutritional value to organisms.

Directions

Suspend 20.05 grams in 900 ml distilled water. Dissolve 10.00 gms of D-cellobiose in 100ml of distilled water. Heat to boiling to dissolve the medium completely. Sterilize both the solutions separately by autoclaving at 15 lbs pressure(121°C) for 15 minutes .Cool to 45-50 °C

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:
White to cream coloured, opalescent gel with precipitate forms in Petri plates
Reaction:
Reaction of 2.01% w/v aqueous solution is pH 6.4 ± 0.2 at 25°C.
Cultural Response:
Cultural characteristics observed after an incubation at 25-30°C for 5-6 days.

Organism (ATCC)	Growth	Colour of the colony
Xanthomonas campesris pv. carota	Luxuriant	Straw yellow, glistening, round, smooth, convex and 2-3mm in diameter.
Escherichia coli (25922)	Inhibited	-
Staphylococcus aureus (25923)	Inhibited	-
Saccharomyces cerevisiae (9763)	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

- Parks, R and Crowe, F. 1998. Sensitivity of Xanthomonas campestris pv. carotae to copper pesticides in central oregon carrot seed fields.
- Umesh, K. C., R. M. Davis, and R. L. Gilbertson. 1998. Seed contamination thresholds for development of carrot bacterial blight caused by Xanthomonas campestris pv. carotae. Plant Dis. 82:12711275.
- Cubeta , M.A. and Kuan , T.L., 1986 . Comparison of MD5 and XCS medium and development of MD5A medium for detecting Xanthomonas campestris pv. carotae in carrot seed Phytopathology 76:1109

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conforms solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at **CDH** is true and accurate.
- **Central Drug House Pvt. Ltd.** reserves the right to make changes to specifications and information related to the products at any time.
- Products are not intended for human or animal diagnostic or therapeutic use but for laboratory, research or further manufacturing of diagnostic reagents extra.
- Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.
- Do not use the products if it fails to meet specifications for identity and performens parameters.