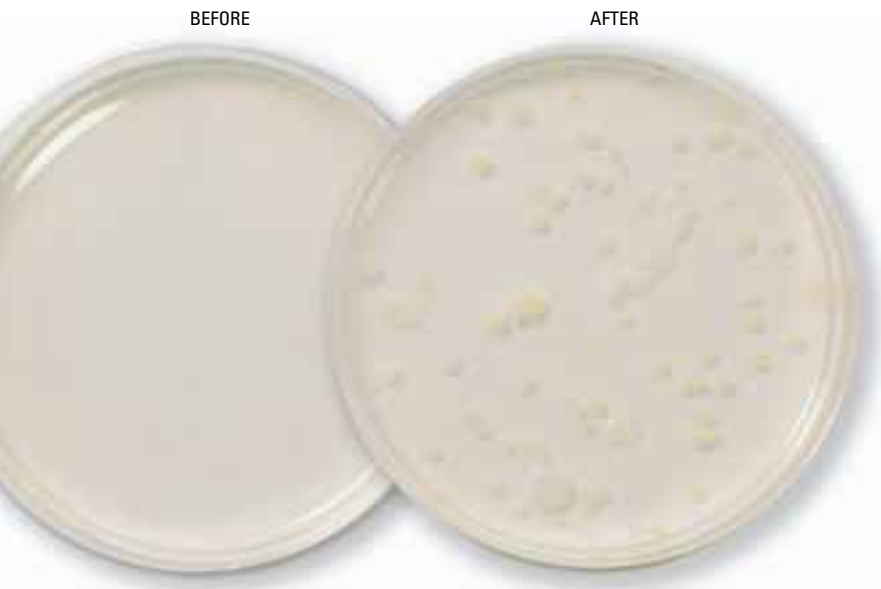


# D5124 mD5A Medium

Crop: **Carrot (*Daucus carota*)**

Disease: **Bacterial leaf blight**

Pathogen: ***Xanthomonas hortorum* pv. *carotae***



mD5A (modified D-5 Agar medium) is used to detect seed borne *Xanthomonas campestris* pv. *carota* (*Xccar*), the causal organism of bacterial blight of carrots. Contaminated seed lots can be detected by dilution plating of the bacterial extract on mD5A and another semi-selective medium. Suspected isolates are then transferred to YDC. Finally, the identity of the suspected isolates can be determined by PCR. Colonies of *Xccar* on mD5A medium look straw-yellow, glistening, round, smooth, convex and are 2–3 mm in diameter.

## COMPOSITION OF MEDIA D5124: mD5A MEDIUM

COMPOUND	GRAM/LITER
Agar	15.0
Sodium dihydrogen phosphate (NaH <sub>2</sub> PO <sub>4</sub> )	0.9
Di-potassium hydrogen phosphate (K <sub>2</sub> HPO <sub>4</sub> )	3.0
Magnesium sulphate anhydrous (MgSO <sub>4</sub> anhydrous)	0.15
Ammonium chloride (NH <sub>4</sub> Cl)	1.0

## METHOD

- Dissolve 20.1 grams of ingredients in distilled water and adjust volume to 900 ml and adjust pH to 6.4.
- Dissolve 10.0 grams of D-cellobiose in distilled water and adjust volume to 100 ml.
- Autoclave the solutions separately (121 °C, 15 psi, 15 minutes).
- Prepare the following sterile amino acids and antibiotics solutions and add the following amounts per liter medium:
  - 5 mg L-glutamic acid (G0707)
  - 1 mg L-methionine (M0715)
  - 35 mg nystatin (N0138)
  - 10 mg cephalixin monohydrate (C0110)
  - 10 mg bacitracin (B0106)
- Allow medium to cool down to ca. 45 °C – 50 °C and add solutions.
- Mix gently to avoid air bubbles and pour plates (15-20 ml per 9.0 cm plate).

## Reference:

Kuan, T.L., Minsavage, G.V. and Gabrielson, R.L. 1985. Detection of *Xanthomonas campestris* pv. *carotae* in carrot seed. Plant disease 61758-61760.  
Cubeta, M.S. and Kuan, T.L. 1986 Comparison of MD5 and XCS media and development of MD5A medium for detection of *Xanthomonas hortorum* p.v. *carotae* in carrot seed, Phytopathology 76: 1109 (Abstract)

## D5124 mD5A MEDIUM

D5124.1000

1 kg

For prepared and ready to use plates of this medium contact:  
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