

# C5122

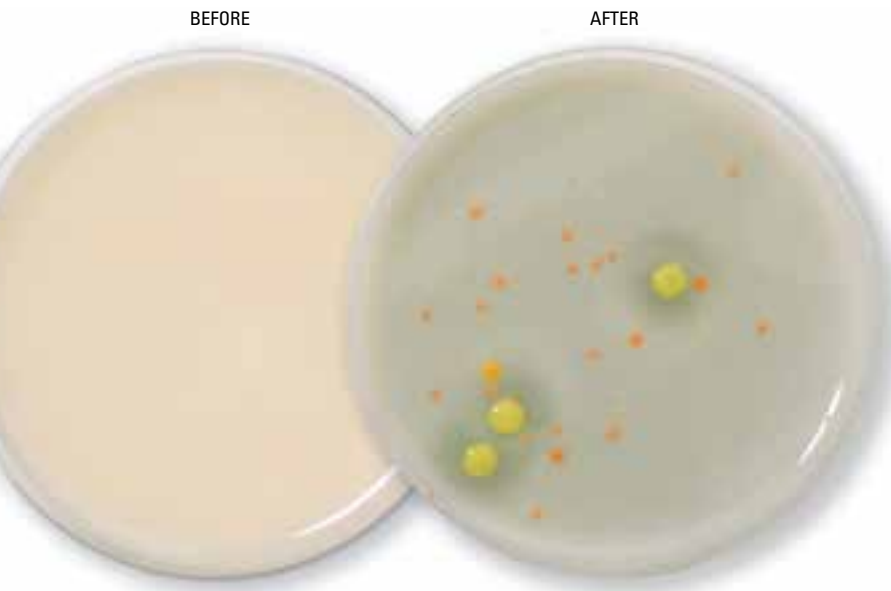
## mCS20ABN Medium

(extra phosphate and Agar)

Crop: **Brassica**

Disease: **Black rot and bacterial leaf spot**

Pathogen: ***Xanthomonas campestris* pv. *campestris* and *Xanthomonas campestris* pv. *armoraciae***



CS20ABN has been developed by Chang et al. to isolate *Xanthomonas campestris* pv. *campestris* (*Xcc*) from crucifer seeds. The original medium recipe allowed the quick isolation of most isolates of *Xcc*. However, the recovery of some isolates of *Xcc* was poor due to pH-dependent sensitivity to neomycin. In the modified version, the pH is lowered to 6.5 by the addition of extra potassium dihydrogen phosphate.

This modification improved the recovery of some neomycin-sensitive isolates considerably.

Contaminated seed lots can be detected by dilution plating of the bacterial extract on mCS20ABN and mFS. Suspected isolates are then transferred to YDC. Finally, the identity of the suspected isolates can be determined by a pathogenicity test using brassica seedlings.

The colonies of *Xcc* and *Xanthomonas campestris* pv. *armoraciae* are yellow, mucoid and surrounded by a zone of starch hydrolysis.

### COMPOSITION OF MEDIA

#### C5122: mCS20ABN MEDIUM

COMPOUND	GRAM/LITER
Agar	18.0
Soluble starch	25.0
Soya Peptone	2.0
Tryptone	2.0
Potassium dihydrogen phosphate (KH <sub>2</sub> PO <sub>4</sub> )	2.8
Di-ammonium hydrogen phosphate ((NH <sub>4</sub> ) <sub>2</sub> HPO <sub>4</sub> )	0.8
Magnesium sulphate anhydrous (MgSO <sub>4</sub> anhydrous)	0.1952
L-glutamine	6.0
L-histidine	1.0
Glucose monohydrate	1.0

### METHOD

- Dissolve 58.8 grams of ingredients in 900 ml distilled water.
- Adjust pH to 6.5 and adjust volume to 1000 ml.
- pH should be 6.5 and not higher!
- Autoclave the solution (121 °C, 15 psi, 15 minutes).
- Prepare sterile antibiotic solutions and add the following amounts per liter medium:
  - 35 mg nystatin (N0138)
  - 40 mg neomycin (M0135)
  - 100 mg bacitracin (B0106)
- Allow medium to cool down to ca. 45 °C – 50 °C and add antibiotics.
- Mix gently to avoid air bubbles and pour plates (15-20 ml per 9.0 cm plate).
- Store plates for 4 days at 4 °C to improve visibility of starch hydrolysis.

### Reference:

Chang, C.J., Donaldson, R., Crowley, M, and Pinnow, D. 1991. A new semiselective medium for the isolation of *Xanthomonas campestris* pv. *campestris*. *Phytopathology* 81:449-453.

### C5122 mCS20ABN MEDIUM

C5122.1000

1 kg

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