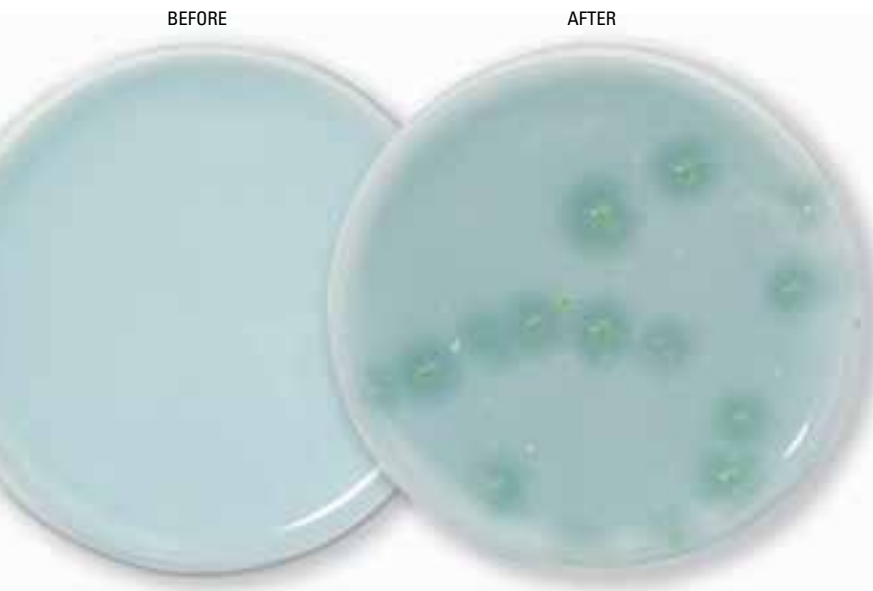


# F5123

## mFS Medium

Crop: **Brassica**Disease: **Black rot and bacterial leaf spot**Pathogen: ***Xanthomonas campestris* pv. *campestris***  
***Xanthomonas campestris* pv. *armoraciae***

mFS (modified Fieldhouse Sasser medium) has been developed to detect black rot in brassica. This medium is complementary to mCS20ABN (C5122) due to some alternative antibiotics. Modifications concern the addition of extra starch and omission of gentamycin.

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 *Xanthomonas campestris* pv. *campestris* (*Xcc*) and *Xanthomonas campestris* pv. *armoraciae* (*Xca*) on mFS medium are pale green to transparent, mucoid and surrounded by a small zone of starch hydrolysis. Colonies are in general smaller than on mCS20ABN and may show remarkable variation in size and may be visible only after 5-6 days.

### COMPOSITION OF MEDIA

#### F5123: mFS MEDIUM

| COMPOUND   | GRAM/LITER |
|--|------------|
| Soluble starch   | 25.0       |
| Yeast Extract  | 0.1        |
| Di-potassium hydrogen phosphate (K <sub>2</sub> HPO <sub>4</sub> ) | 0.8        |
| Potassium dihydrogen phosphate (KH <sub>2</sub> PO <sub>4</sub> )  | 0.8        |
| Potassium nitrate (KNO <sub>3</sub> )                              | 0.5        |
| Magnesium sulphate anhydrous (MgSO <sub>4</sub> anhydrous)         | 0.0488     |
| Agar   | 15.0       |

### METHOD

- Dissolve 42.2 grams of ingredients in distilled water and adjust volume to 950 ml and adjust pH to 6.8.
- Add 1.5 ml methyl green (1 % aq.) and adjust volume to 1000 ml with distilled water.
- Autoclave the solution (121 °C, 15 psi, 15 minutes).
- Prepare the following sterile solutions of vitamins, amino acids and antibiotics per liter medium:
  - 35 mg nystatin (N0138)
  - 3 mg D-methionine (M0715)
  - 1 mg pyridoxine-HCl (P0612)
  - 50 mg cephalixin monohydrate (C0110)
  - 30 mg trimethoprim (T0154)
- 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).
- Store plates for 4 days at 4 °C to improve visibility of starch hydrolysis.

### Reference:

Yuen, G.Y., Alvarez, A.M., Benedict, A.A., and Trotter, K.J. 1987. Use of monoclonal antibodies to monitor the dissemination of *Xanthomonas campestris* pv. *campestris*. *Phytopathology* 77:366-370.

### F5123 mFS MEDIUM

F5123.1000

1 kg

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