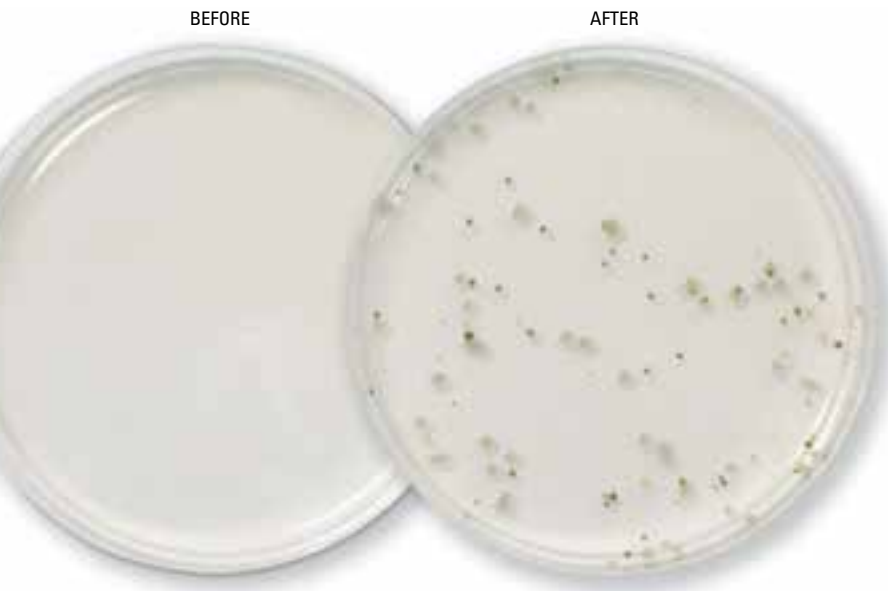


S5127 SCM Medium

Crop: **Tomato (*Lycopersicon lycopersicum*)**

Disease: **Bacterial canker**

Pathogen: ***Clavibacter michiganensis* subsp. *michiganensis***



Bacterial canker is the most important bacterial disease of tomato. The causal organism is *Clavibacter michiganensis* subsp. *michiganensis* (*Cmm*) and this bacterium can be introduced by contaminated seeds. For the detection of *Cmm*, tomato seeds are first soaked in buffer. Then a stomacher is used for the release of bacteria from the seeds. After the concentration of the bacteria, dilution plating on two semi-selective media is performed. SCM medium is such a semi-selective media. Actually, there are several modifications in use concerning the used carbon source, LiCl and the addition of antibiotics. This medium is used in combination with D2ANX medium (D5128). After dilution plating suspected isolates are transferred to YDC. Finally the identity of suspected isolates is determined by a pathogenicity test or PCR. The colonies of *Clavibacter michiganensis* subsp. *michiganensis* on SCM are small, light to dark grey, glistening, fluidal and often irregularly shaped.

COMPOSITION OF MEDIA S5127: mSCM MEDIUM

COMPOUND	GRAM/LITER
Agar	18.0
Potassium dihydrogen phosphate (KH ₂ PO ₄)	0.5
Di-potassium hydrogen phosphate (K ₂ HPO ₄)	2.0
Magnesium sulphate anhydrous (MgSO ₄ anhydrous)	0.122
Boric acid (H ₃ BO ₃)	1.5
Yeast Extract	0.1
Sucrose	10.0

METHOD

- Dissolve 32.2 grams of ingredients in distilled water, adjust volume to 1000 ml and adjust pH to 7.3.
- Autoclave the solution (121 °C, 15 psi, 15 minutes).
- Prepare sterile solutions and add the following amounts per liter medium:
 - 100 mg nicotinic acid (N0611)
 - 30 mg nalidixic acid (N0134)
 - 100 mg cycloheximide (C0176)
 - 10 mg potassium tellurite (1 ml of 1% tellurite solution)
- 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).

Reference:

Fatmi, M. and Schaad, N.W. 1988. Semiselective agar medium for isolation of *Clavibacter michiganense* subsp. *michiganense* from tomato seeds. *Phytopathology* 78:121-126.

S5127 SCM MEDIUM

S5127.1000

1 kg

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