

M5131 MXV Medium

Crop:	Pepper (<i>Capsicum annuum</i>) Tomato (<i>Lycopersicon lycopersicum</i>)
Disease:	Bacterial spot
Pathogen:	<i>Xanthomonas campestris</i> pv. <i>vesicatoria</i> <i>Xanthomonas vesicatoria</i>



Bacterial spot is an important bacterial disease of peppers. Two different bacteria, *Xanthomonas campestris* pv. *vesicatoria* (*Xcv*) and *Xanthomonas vesicatoria* (*Xv*) can incite this seed borne disease. MXV medium is a semi-selective medium for detection of *Xcv* and *Xv* on seeds of pepper and tomato. The colonies of *Xcv* on MXV plates utilize Tween 80 and are yellow and mucoid. Contaminated seed lots can be detected by dilution plating of the bacterial extract on mTMB, CKTM or mKM. Suspected isolates are then transferred to YDC. Finally, the identity of the suspected isolates can be determined by a pathogenicity test or PCR.

COMPOSITION OF MEDIA M5131: MXV MEDIUM

COMPOUND	GRAM/LITER
Agar	15.0
Potassium dihydrogen phosphate (KH ₂ PO ₄)	0.8
Di-potassium hydrogen phosphate (K ₂ HPO ₄)	0.8
Ammonium chloride (NH ₄ Cl)	1.0
Lactose	10.0
Threhalose	4.0
Thiobarbituric acid	0.1
Yeast Extract	0.5

METHOD

- Dissolve 32.2 grams of the ingredients in distilled water, adjust volume to 900 ml and adjust pH to 6.6.
- Dissolve 10 ml of Tween 80 in distilled water and adjust volume to 100 ml.
- Autoclave the solutions separately (121 °C, 15 psi, 15 minutes).
- Prepare sterile antibiotic solutions and add the following amounts per liter medium:
 - 32.5 mg cephalixin monohydrate (C0110)
 - 100 mg bacitracin (B0106)
 - 6 mg 5-fluorouracil (F0123)
 - 10 mg neomycin sulphate (M0135)
 - 0.2 mg tobramycin sulphate (T0153)
 - 100 mg cycloheximide (C0176)
- Allow medium to cool down to ca. 45 °C – 50 °C, mix the solutions and add antibiotics.
- Mix gently to avoid air bubbles and pour plates (15-20 ml per 9.0 cm plate).

Reference:

McGuire, R.G., Jones, J.B., and Sasser, M. 1986. Tween medium for semiselective isolation of *Xanthomonas campestris* pv. *veiscatoria* from soil and plant material. Plant Dis. 70:887-891.

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M5131.1000 1 kg

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