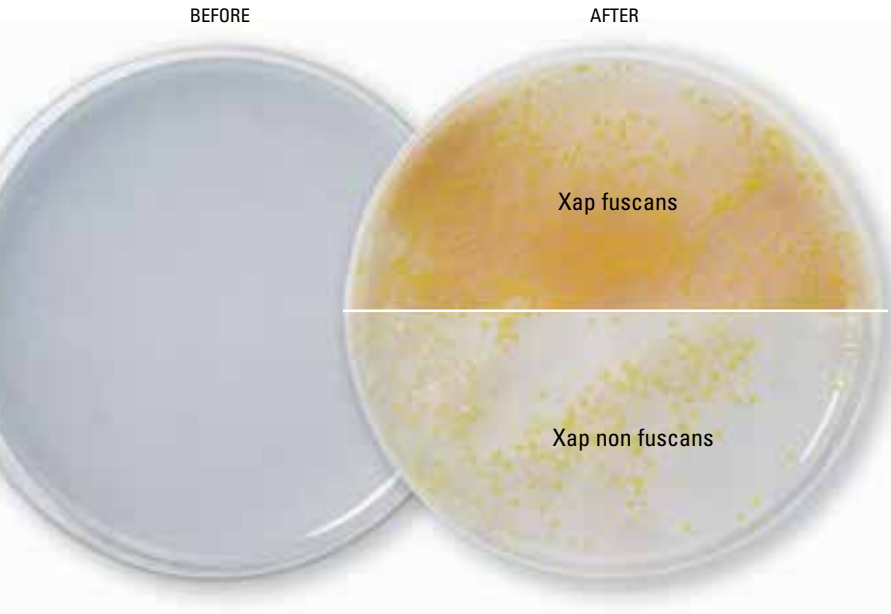
X5121
mXCP1 Medium

Crop: **Bean *(Phaseolus vulgaris)***

Disease: **Common blight**

Pathogen: ***Xanthomonas axonopodis* pv. *phaseoli***



The mXCP1 (modified Xanthomonas Campestris pv. Phaseoli) medium is a semi-selective medium for the detection of *Xanthomonas axonopodis* pv. *phaseoli* (*Xap*) in bean seed. Both the fuscans and non-fuscans type of *Xap* grow on mXCP1. However the production of the fuscous pigment only becomes visible after a relatively long incubation. Modification of the medium was necessary because of poor recovery of isolates of the *Xap* var. fuscans type. Recognition of putative *Xap* colonies relies on the ability of the *Xanthomonas axonopodis* pv. *phaseoli* to hydrolyze starch. The colonies of *Xanthomonas axonopodis* pv. *phaseoli* on the mXCP1 plate are surrounded by a clear zone of starch hydrolysis.
Detection of *Psp* and *Xap* is often performed in combi-assay. *Xap* is detected by dilution plating of bacterial extract from seeds on mXCP1. Then suspected colonies from mXCP1 should be transferred to YDC. Finally, the identity of suspected isolates is confirmed by a pathogenicity test or PCR.
Xap colonies are yellow mucoid, convex and surrounded by a clear zone of starch hydrolysis. Colonies of var. fuscan are distinguished by brown pigmentation.

COMPOSITION OF MEDIA X5121: mXCP1 MEDIUM

COMPOUND	GRAM/LITER
Peptone special	10.0
Potassium bromide (KBr)	10.0
Calcium chloride anhydrous ($CaCl_2$ anhydrous)	0.25
Agar	20.0
Soluble Starch	20.0
Crystal Violet	0.0015

METHOD

- Dissolve 60.2 grams of the ingredients in distilled water and adjust volume to 900 ml.
- Dissolve 10 ml Tween 80 in distilled water and adjust volume to 100 ml.
- Autoclave the solutions (121 °C, 15 psi, 15 minutes).
- Prepare sterile antibiotic solutions and add the following amounts per liter medium:
  10 mg cephalexin monohydrate (C0110)
  3 mg 5-fluorouracil (F0123)
  0.1 mg tobramycin sulphate (T0153)
  35 mg nystatin (N0138)
- Allow medium to cool down to ca. 45 °C – 50 °C, mix solutions 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:
McGuire,R.G., Jones, J.B. and Sasser, M. 1986. Tween media for semiselective isolation of *Xanthomonas campestris pv. vesicatoria* from soil and plant material. Plant Dis. 70: 887 - 891

X5121 mXCP1 MEDIUM	
X5121.1000	1 kg

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