

XANTHOMONAS SELECTIVE AGAR

Selective medium for the isolation of *Xanthomonas campestris* pv *campestris* and *Xanthomonas* spp. from crucifer seeds.

DESCRIPTION

Xanthomonas campestris pv. *campestris* and *Xanthomonas campestris* pv. *armoraciae*, the causal agent of black rot of crucifers, is a bacterial pathogen of significant economic importance. The disease occurs in many countries and regions. It produces a range of extracellular enzymes (including proteases, pectinases and cellulases) and extra cellular polysaccharide (EPS), which collectively play essential roles in pathogenesis.

Xanthomonas Selective Agar is a selective medium for the isolation of *Xanthomonas campestris* pv *campestris* and *Xanthomonas* spp. from crucifer seeds.

PRINCIPLE

The medium contains soluble starch which helps in the detection of starch hydrolyzing organisms. Starch is a reserve sugar for the plant, hence phyto pathogen utilizes starch from plant as a energy source. Bacteria which show a clear zone around the growth produce the exoenzyme amylase which cleaves the starch into di- and monosaccharides. Soya peptone and tryptone provide nitrogenous compounds, carbon, vitamin B complex and trace ingredients. The inorganic phosphates in the medium serve as buffers. Amino acids provide necessary growth factor for bacterial population. Glucose acts as a alternate carbon source for the organism.

COMPOSITION	g/L
Soya Peptone	2.00
Tryptone	2.00
Soluble Starch	25.00
Potassium dihydrogen phosphate	2.80
Diammonium hydrogen phosphate	0.80
Magnesium Sulphate anhydrous	0.1952
L-Glutamine	6.00
L-Histidine	1.00
Glucose monohydrate	1.00
Nystatin	35.00 mg
Neomycin	40.00 mg
Bacitracin	100.00 mg
Agar	18.00

Final pH 6,5 ± 0,2 at 25°C

WARNING AND PRECAUTIONS

Observe the precautions normally taken when handling laboratory reagents.

Prepared Medium: The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous.

Safety Data Sheet is available on request for professional users.

All wast must be disposed of according to local directives.

STORAGE AND STABILITY

Prepared medium: 10-25°C

The product is stable until the expiration date indicated on the label under the recommended storage conditions.

PREPARATION

Prepared medium (bottles): Melt the content of the bottle in a water bath at 100°C until completely dissolved. Then screw the cap and check the homogeneity of the dissolved medium, if it is the case turning the bottle upside down.

Cool at 45-50°C, mix well avoiding foam formation and aseptically distribute into Petri dishes.

QUALITY CONTROL

Prepared medium: Yellow coloured, opalescent gel.

Cultural characteristics observed, after an incubation at 25-30°C for 5-7 days:

MICROORGANISM	GROWTH
<i>Xanthomonas campestris</i> pv <i>campestris</i> ATCC 33913	luxuriant Yellow, Mucoïd colonies surrounded by a zone of starch hydrolysis
<i>Xanthomonas campestris</i> pv. <i>armoraciae</i> ATCC 13951	luxuriant Yellow, Mucoïd colonies surrounded by a zone of starch hydrolysis
<i>Escherichia coli</i>	inhibited
<i>Staphylococcus aureus</i>	inhibited
<i>Saccharomyces cerevisiae</i>	inhibited

REFERENCES

- 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.
- Dow, J. M., and Daniels, M. J. 1994. Pathogenicity determinants and global regulation of pathogenicity of *Xanthomonas campestris* pv. *campestris*. Pages 29-41 in: *Current Topics in Microbiology and Immunology*, Vol. 192: *Bacterial Pathogenesis of Plants and Animals*. J. L. Dangl, ed. Springer-Verlag, Berlin.

PRESENTATION

Packaging

REF.

Prepared medium:

XANTHOMONAS SELECTIVE AGAR

12 x 200 mL bottles

70038

SYMBOLS



Read the instructions



Biological hazard



CE Mark (product complies with the requirements of Regulation (EU) 746/2017)



Temperature limitation



Use by



For in vitro diagnostic use



Manufacturer