

COMPOSITION OF THE POLYSACCHARIDES PRODUCED BY
COLLETOTRICHUM CAPSICI AND C. GLOEOSPORIOIDES

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Bacteria and fungi are known to secrete exocellular polysaccharides in to the growth medium. This is a preliminary report regarding the isolation and composition of the exocellular polysaccharides produced by the two fungi Colletotrichum capsici (Syd.) Butler & Bisby, and C. gloeosporioides (Penz.) Penz. and Sacc., which are pathogenic on Capsicum frutescens (chili), C. annuum (green pepper) and Carica papaya (papaw). C. gloeosporioides infects many other fruits and vegetables including Persea americana (avocado), Punica granatum (pomegranate) and Citrus sinensis (orange).

Colletotrichum capsici and C. gloeosporioides were isolated from diseased fruits of Capsicum frutescens and P. americana respectively. Shake cultures of each fungus were grown under aseptic conditions in Czapek-Dox liquid media for three days, then filtered, dialysed and centrifuged. The supernatants were freeze dried to yield polymeric material PSCC and PSCG from C. capsici and C. gloeosporioides respectively. Approximately 400-500 mg of polymeric material was isolated from 4000 ml of each culture filtrate. The carbohydrate content and sugar composition of each crude sample was determined. PSCC contained the neutral sugars rhamnose, galactose and glucose while PSCG was composed of mannose, galactose and glucose. Paper chromatography of a hydrolysate prepared from each sample also showed the presence of a substantial proportion of amino acids. The crude material was separated in to acetone soluble and acetone insoluble polysaccharides and analysed.

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