

CHARACTERISATION OF *CAPSICUM ANNUUM* SEEDS: CELL WALL POLYSACCHARIDES COMPOSITION AND LIGHT MICROSCOPY STUDIES

Dourado, F.; Vasco, P.*; Gama, F.M.; Coimbra, M.A.*; Mota, M.

Dep. Engenharia Biológica, Campus de Gualtar Universidade do Minho, 4719 Braga, Portugal

*Dep. Química Universidade de Aveiro, 3810 Aveiro, Portugal

The oil from *Capsicum annuum* ("chilli") seeds, abundant in the region of Mexico, is used for cosmetic and medicinal purposes. These seeds were characterised by light microscopy using several stains, and the cell wall polysaccharides were extracted and analysed. The effect on the cells morphology of several different strategies (hot aqueous extraction, ethanol extraction, enzyme assisted aqueous extraction) for oil removal is also shown.

Optical microscopy: The seeds were fixed with a mixture containing acetic acid, formaldehyde and ethanol. Sections of 5-10 μm thickness were obtained after dehydration in a graded alcohol series and embedding in paraffin. These sections were stained using the following methods: Sudan Black (lipids stain black), Safranin and Picro Aniline Blue (cellulose stains blue and lignin stains red), Premixed Iron Hematoxylin, PAS - Amido Black (Figure 1), Safranin and Fast Green, Coomassie Brilliant Blue R250, Toluidine Blue, Safranin O. and Astra-blue (not shown).

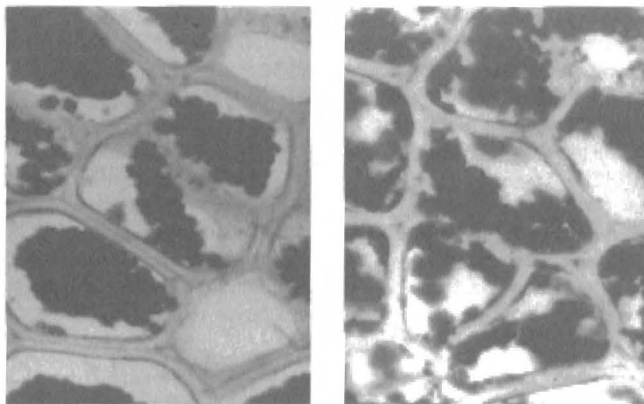


Figure 1. - Light micrograph from the *Capsicum annuum* seeds - stained with PAS - Amido Black, (640 X) . .

Cell wall characterisation: The alcohol insoluble residue was prepared from grounded seeds which were first cryomilled and then delignified with chlorite/acetic acid for 4 h, followed by sequential extraction with DMSO and a graded series of KOH solutions.

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