

PECTIN EXTRACTION FROM ORANGE PEELS WASTE BY MICROWAVE ASSISTED ACID HYDROLYSIS (MWAH)

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ABSTRACT

A comparison study, at laboratory scale, of two pectin extraction methods using orange peels waste is presented: conventional acid hydrolysis and acid hydrolysis assisted by microwave (MWAH). Extraction times were considerably lower for MWAH. The following optimal values, within the studied ranges, for both methods were determined: 2.17 for pH and 18:1 for solvent: raw material ratio. The optimal time for HMO was 7 min. An equation that represents the performance of MWAH pectin extraction, reliable within the studied range, was obtained, to estimate the recovery percentage as a function of pH, solvent: raw material ratio and extraction time. By applying this method, a save of energy and time on pectin extraction process is expected.

Keywords: Pectin, Microwave, Acid Hydrolysis, Orange Peels (*Citrus cinensis*) Waste.