

EXTRACTING CONDITIONS OPTIMIZATION AND BIOACTIVITY OF POLYSACCHARIDES FROM THE PODS OF HARICOT VERT

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Abstract. Polysaccharides from the pods of haricot vert (*Phaseolus vulgaris* L.) were extracted using a simple heating method, by varying extracting temperature, heating time, solid-to-liquid ratio, and solvent composition. The obtained results were processed using statistical analysis that helped to identify the optimal conditions for the polysaccharides' extraction process. Moreover, the results of the bioassays were compared and statistically analysed to look for the correlation among extracting conditions, compositions, and bioactivities. The extracts of optimal conditions showed significant antioxidant and α -amylase inhibition. Correlations among extracting conditions, compositions, and bioactivities were evaluated based on partial least square (PLS) regression model. Therefore, this study represents a promising production method of bioactive polysaccharides extract in the food and pharmaceutical industry.

Keywords: polysaccharide extraction, optimization, haricot vert, bioactivity.

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