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Title: PROCESS OPTIMIZATION AND ANALYSIS OF MICROWAVE ASSISTED EXTRACTION OF PECTIN FROM DRAGON FRUIT PEEL

Author: K. Thirugnanasambandham V. Sivakumar J. Prakash

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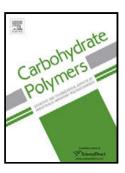
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2 EXTRACTION OF PECTIN FROM DRAGON FRUIT PEEL

- 3 K. Thirugnanasambandham^a, V. Sivakumar^{a*} and J. Prakash Maran^a
- ^a Department of Food Technology, Kongu Engineering College, Perundurai, Erode-638052, TN,
- 5 India.

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- 6 *Corresponding author
- 7 E-mail: drvsivakumar@yahoo.com
- 8 Tel.: +91-4294-226606
- 9 Fax: +91-4294-220087

10 Abstract

- 11 Microwave assisted extraction (MAE) technique was employed for the extraction of
- pectin from dragon fruit peel. The extracting parameters were optimized by using four-variable-
- three-level Box-Behnken design (BBD) coupled with response surface methodology (RSM).
- 14 RSM analysis indicated good correspondence between experimental and predicted values. 3D
- 15 response surface plots were used to study the interactive effects of process variables on
- extraction of pectin. The optimum extraction conditions for the maximum yield of pectin were
- power of 400 W, temperature of 45°C, extracting time of 20 min and solid-liquid ratio of 24
- 18 g/mL. Under these conditions, 7.5% of pectin was extracted.
- 19 Keywords: Pectin, Dragon fruit, Microwave Extraction, Box-Behnken Design, Optimization.

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