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Author: K. Thirugnanasambandham V. Sivakumar J. Prakash Maran



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1 **PROCESS OPTIMIZATION AND ANALYSIS OF MICROWAVE ASSISTED**
2 **EXTRACTION OF PECTIN FROM DRAGON FRUIT PEEL**

3 K. Thirugnanasambandham^a, V. Sivakumar^{a*} and J. Prakash Maran^a

4 ^a Department of Food Technology, Kongu Engineering College, Perundurai, Erode-638052, TN,
5 India.

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
12 pectin from dragon fruit peel. The extracting parameters were optimized by using four-variable-
13 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
16 extraction of pectin. The optimum extraction conditions for the maximum yield of pectin were
17 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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