

Microwave-Assisted Extraction of Lycopene from Gac Arils (*Momordica cochinchinensis* (Lour.) Spreng)

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Abstract : Gac fruit (*Momordica cochinchinensis* (Lour.) Spreng) possesses high potential for health food as it contains high lycopene contents. The objective of this study was to optimize the extraction of lycopene from gac arils using the microwave extraction method. Response surface method was used to find the conditions that optimize the extraction of lycopene from gac arils. The parameters of extraction used in this study were extraction time (120-600 seconds), the solvent to sample ratio (10:1, 20:1, 30:1, 40:1 and 50:1 mL/g) and set microwave power (100-800 watts). The results showed that the microwave extraction condition at the extraction time of 360 seconds, the sample ratio of 30:1 mL/g and the microwave power of 450 watts were suggested since it exhibited the highest value of lycopene content of 9.86 mg/gDW. It was also observed that lycopene contents extracted from gac arils by microwave method were higher than that by the conventional method.

Keywords : conventional extraction, Gac arils, microwave-assisted extraction, Lycopene

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