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## Isolation and purification of $\beta$ -carotene from morinda citrifolia as HPLC standard and active pharmaceutical ingredient (Article)

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### Abstract

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Qualitative and quantitative analysis of individual carotenoids content and composition are complicated, time consuming and in fact very costly. The crucial and vital part is the availability and reliability of the pure standards. Most of the individual carotenoids are commercially available either in natural or synthetic form but they are quite expensive and some of it not available in the market anymore. These problems strongly associated with the accuracy and reliability of High Performance Liquid Chromatography (HPLC) analysis data. Therefore, this study aimed to set up an analytical scheme of obtaining  $\beta$ -carotene standard from the leaves of *Morinda citrifolia* as one of the carotenoid standards for HPLC analysis. *M. citrifolia* has been selected due to its abundance throughout the year with tropical climate. The scheme via open column chromatography (OCC) established that the purity of  $\beta$ -carotene standard was 97% and the coefficient of correlation was 0.9923. However after 30 day storage period of time, the purity decreased to 95.46%. Although these had an effect on the carotenoid standard stability but it can be a reliable source of  $\beta$ -carotene standard for HPLC analysis as well as active pharmaceutical ingredient for cosmeceutical, nutraceutical, food and beverage industries. © 2017 Lifescience Global.

### Reaxys Database Information

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### Author keywords

Active pharmaceutical ingredient Carotenoid Morinda citrifolia  $\beta$ -carotene

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