

**DETERMINATION OF HESPERIDIN IN FOOD BY
ULTRA PERFORMANCE LIQUID CHROMATOGRAPHY**

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**RESEARCH PROJECT REPORT SUBMITTED IN
FULFILMENT OF THE REQUIREMENTS
FOR THE DEGREE OF**

**MASTER OF SCIENCE
ANALYTICAL CHEMISTRY &
INSTRUMENTAL ANALYSIS**

**DEPARTMENT OF CHEMISTRY
FACULTY OF SCIENCE
UNIVERSITY OF MALAYA
KUALA LUMPUR
2013**

UNIVERSITI MALAYA

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Abstract

Hesperidin analysis in food is a simple application involving chromatographic based technique. Method development and validation was performed in order to study linearity, precision and accuracy of the analytical method. The means recoveries obtained at known concentration of QC sample 1000.85 ppm for Hesperidin using Ultra Performance Liquid Chromatography with relative standard deviation of RSD 0.1%. Linearity for Hesperidin was determined at nine different concentration levels ranging from 4.97 to 50116.30 ppm. Detection and quantitation limits were ranged from 0.09992 ppm and 0.333 ppm respectively. The validated Hesperidin analytical method was applied to the study of Hesperidin in food samples which include fruits, vegetables and commercial fruit juices group. The evaluation of the study was elaborated further in the results recoveries.

Abstrak

Analisis Hesperidin dalam makanan adalah aplikasi yang mudah melibatkan teknik berasaskan kromatografi. Kaedah pembangunan dan pengesahan telah dilakukan untuk mengkaji kelinearan dan ketepatan kaedah analisis. Ketepatan Hesperidin diperolehi pada kepekatan yang diketahui iaitu QC sampel 1.000.85 ppm menggunakan Ultra Performance Liquid Chromatography dengan sisihan piawai relatif RSD 0.1%. Kelinearan untuk Hesperidin telah ditentukan di sembilan tahap kepekatan yang berbeza antara 4.97 hingga 50116.30 ppm. Had pengesanan dan quantitation Hesperidin telah ditentukan pada kepekatan 0.09992 ppm dan 0.333 ppm masing-masing. Kaedah analisis Hesperidin yang disahkan telah digunakan untuk mengkaji Hesperidin dalam sampel makanan termasuk buah-buahan, sayur-sayuran dan jus komersil. Penilaian kajian ini dihuraikan selanjutnya dalam perolehan keputusan.

Acknowledgements

This study would not have been possible without the support of many people.

I would like to express my gratitude to my supervisor ASSOCIATE PROFESSOR DR. NOR KARTINI BINTI ABU BAKAR who was abundantly helpful and offered invaluable assistance, support and guidance. Her willingness to motivate me contributed tremendously to my study.

Also, I would like to take this opportunity to thank to UNIVERISTY OF MALAYA for offering this subject, MASTER OF SCIENCE (ANALYTICAL CHEMISTRY & INSTRUMENTAL ANALYSIS). It gave me an opportunity to participate and learn about analytical instrumental analysis.

Chee Pui Har

2013

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