

PHARMATECH 2012 • CONFERENCE & EXHIBITION • 20 - 21 NOVEMBER 2012



PharmaTech 2012

International Conference and Exhibition on Pharmaceutical, Nutraceutical and Cosmeceutical Technology

Incorporating:



Nutraceutical
Technology

Cosmeceutical
Technology



Delivery, Discovery, Clinical and Manufacturing Chains

20 - 21 November 2012
Kuala Lumpur Convention Centre

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PharmaTech 2012

International Conference and Exhibition on Pharmaceutical, Nutraceutical and Cosmeceutical Technology

Exhibition

Date : 20 - 21 November 2012

Venue : Conference Hall 2, Level 3, Kuala Lumpur Convention Centre

Conference

Date : 20 - 21 November 2012

Venues : Plenary Theater and Meeting Rooms at Level 3
Kuala Lumpur Convention Centre

Organised by

- Non-Destructive Biomedical and Pharmaceutical Research Centre, Universiti Teknologi MARA
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Exhibition Opening Hours

20 November 2012 : 10:00am - 6:00pm

21 November 2012 : 10:00am - 5:00pm

CAROTENOID DIVERSITY IN 22 SPECIES OF MALAY TRADITIONAL *ULAM***Fatimah Azzahra Mohd Zaifuddin,¹ Norazian Mohd Hassan,¹ Rashidi Othman²**¹Department of Pharmaceutical Chemistry, Kulliyyah of Pharmacy, International Islamic University Malaysia, Kuantan, Malaysia²Department of Landscape Architecture, Kulliyyah of Architecture and Environmental Design, International Islamic University Malaysia, Kuala Lumpur, Malaysia

There has been renewed interest of discovering sources of antioxidants that could help in preventing or controlling the occurrence of many chronic illnesses especially for the ones related to oxidative damages caused by free-radicals. These antioxidants including the yellow-orange-red pigments, collectively known as carotenoids, which some of them play a vital role as pro-vitamin A that supplies humans' skin and visual health. Carotenoids also act as boosters to our immune system. Interestingly, although they are yellow-to-red in colours, carotenoids are found in greater concentration in dark green leaves. Due to its location in the vicinity of the equator, Malaysia is blessed with a wonderful diversity of evergreen plants yet documentation for their carotenoids' accumulation is still lacking. With that in mind, this study was aimed to explore the composition and concentration of carotenoids in traditional ulam eaten by Malay community to enable their future enhancement or enrichment. The carotenoids were analysed qualitative and quantitatively via spectrophotometry and high-performance liquid chromatography (HPLC). This research revealed that individual species of ulam not only vary in total carotenoid content, but also vary in carotenoid diversity. In the twenty two ulam species the main carotenoids identified were neoxanthin, violaxanthin, lutein, zeaxanthin, β -cryptoxanthin and β -carotene. Cekur manis was found to have the highest total carotenoid content ($358.90 \pm 21.43 \mu\text{g/g DW}$ (dried weight)) substantially higher than all other ulam species tested. Neoxanthin was found highest ($130.90 \pm 11.4 \mu\text{g/g DW}$) in mengkudu, violaxanthin was detected highest ($117.63 \pm 15.10 \mu\text{g/g DW}$) in cekur manis, whereas lutein ($70.44 \pm 1.94 \mu\text{g/g DW}$) and β -carotene ($179.99 \pm 1.20 \mu\text{g/g DW}$) were found highest in daun selom.

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