



## Microencapsulation of *Cassia alata* extract for topical application

Mulham Alfatama , Farahidah Mohamed , Juliana Md.Jaffri , Norazian Mohd Hassan , Muhammad Taher , Kausar Ahmad

Kulliyah of Pharmacy, International Islamic University Malaysia, Jalan Istana, 25200 Kuantan, Malaysia  
*akausar@iium.edu.my*

### Abstract:

*Cassia alata* has been known to provide relief from various types of abnormal skin conditions. Ointments containing this plant extract can be found in a limited market as most have not been properly registered with regulating bodies. However, it is anticipated that a systematic study may result in commercialisation and be prescribed by health professionals. So far, incorporation of the extract in palm olein-in-water emulsion had been carried out with minimal adverse effect on the stability of the emulsion if the concentration of the plant extract is below a certain concentration. This research aims to use the plant extracts of *cassia alata* using known extraction procedures, followed by microencapsulation. The advantage of doing as such is that the release of the extracts onto the skin can be controlled and can be prolonged. This will ensure continuous delivery of the active ingredient and thereby will very much facilitate the therapy. Stability of the preparation is characterised by sizing of the particles using laser diffraction technique and both transmission and scanning electron microscopy. The extent of diffusion is simulated using a diffusion cell tester to confirm the delivery of the extract into the skin.