

Engkabang fat as a base in preparing encapsulated titanium dioxide for cosmetics purpose.

ABSTRACT

The aim of the present study is to encapsulated titanium dioxide using engkabang fat and beeswax in emulsion system in order to enhance the UV attenuation, test the stability of the samples and characterized them. Those formulations were prepared using high shear homogenizer and followed by high pressure homogenizer. Engkabang fat and beeswax were used as a base material in preparation of formulations. Surface charge measurements of formulations comprising values from -30 mV to -36 mV denoted the presence of stable dispersions. The morphological characterization confirmed the encapsulations of titanium dioxide in the formulations F10-2A. The presence of TiO₂ gave higher conductivity values due to the existence of metal material that carried charge. The formulation containing encapsulated of TiO₂ gave higher absorbance compared to the formulation containing non-encapsulated of TiO₂. Thus, it is effective for cosmeceutical industry.

Keyword: Engkabang fat; High pressure; Encapsulation; Titanium dioxide.