

ABSTRACT

The objective of this study was to extract and evaluate the safety and efficacy of base cream formulations containing crude polysaccharide extracted from *Spirulina* spp., *Cladophora glomerata* and *Spirogyra* spp. extract for moisturizing effect on skin comparing to the base cream formulation. Safety and efficacy activity of the extract in volunteers was also investigated. In the experiment two formulations of cream contained crude extract of 0.3, 0.5% w/w in the formula and base cream were prepared and kept under room temperature ($25\pm 0.5^{\circ}\text{C}$) for one month before tested. The result shown that the cream contained crude extract preparation showed the physical stability. So, further investigation was applied for safety and efficacy test. For safety test, the crude polysaccharide extracted from *Spirulina* spp., *Cladophora glomerata* and *Spirogyra* spp. extract were not presented any irritation on the skin. For performance test of the cream preparation for moisturization by Corneometer® CM 825 with 30 volunteers and evaluated by Paired samples test. The result shown that the cream preparation containing the 0.3% 0.5%w/w in the formula crude polysaccharide extract exhibited moisturizing effect significantly with respectively *p-value* < 0.05 within 95 % of the 100 confidence intervals when compared with base cream.

Key words: *Spirulina* spp., *Cladophora glomerata*, *Spirogyra* spp., Moisturizer