

# **FORMULATION AND DEVELOPMENT OF SKIN CARE CREAM BY USING TEA FLUFF**

A dissertation submitted to the  
Faculty of Animal Science and Export Agriculture of  
Uva Wellassa University  
in partial fulfillment of the requirements for the award of the degree of  
Bachelor of Science in Tea Technology and Value Addition

By  
**BAMBARAWANA LIYANAGE GEETHAMALA  
MADUWANTHI**

**Faculty of Animal Science and Export Agriculture  
Uva Wellassa University**

**2013**

## ABSTRACT

Presently there is a growing interest in utilization of tea plant as it is a good candidate to be used as a natural source in pharmaceutical, food and cosmetic industries all around the world. All teas from the *camellia* tea plant are rich in poly phenols, which are a type of antioxidants. Tea fluff is the finest type of tea particles which is extracted during the tea blending process and it is considered as a waste product in secondary manufacturing process.

Tea extracts are being used for cosmetic products, mainly skin creams because of their anti oxidant activity and anti wrinkling activity. The main aim of this research was to formulate a skin cream using tea fluff extract as a way of utilizing this waste product.

Anti oxidant activity and total polyphenol content of tea fluff were determined to find the quality of raw materials selected for cream formulation. Complete Randomized Design was used as the experimental design in sample preparation with changing percentages of amount of tea fluff. Two sensory evaluation sessions were done to evaluate several sensory attributes by using 30 un-trained panelists. Results were analyzed using the MINITAB statistical analysis package according to the freedman test at 5 % level of significance. The best sample was evaluated through aerobic plate count test and visually observed the physical determinants fortnightly to study the shelf life. pH value, non volatile matters at 105 °C, thermal stability and total non-aqueous content of selected product were determined and it maintained the acceptable levels as expressed by SLSI. The newly formulated cream of tea fluff might open new opportunities for the construction of more efficient, safe, and cost-effective skin-care product.

*Key Words*; Antioxidant, Polyphenol, Tea Fluff