

# ABSTRACT

Silk sericin is a natural protein produced as a by-product during processing of silk cocoons in textile industries. There are ample evidences to suggest that silk sericin possesses remarkable dermatological applications. The present research work was aimed to develop a novel anti-aging and moisturizing lotion from silk sericin. This study also explored the effects of silk cocoons against visible symptoms of aging on human participants in relation to their age, skin type, usage and stress level. SericinPro body lotion was prepared and assessed through various tests including stability test, organoleptic test, skin irritability test, skin sensitivity test, pH measurement and moisture content test. After the preparation of optimized lotion, it was distributed among forty-five human female participants on the basis of four demographic variables such as age, gender, usage and skin types. All participants had applied lotion on their skins for about three months and gave their responses about dermatological potentials of lotion in the form of a questionnaire. Anti-aging facial massage silk cocoons were also distributed to thirty human female participants on the basis of age groups *i.e.*, 20-30, 31-40 and 41-50. These participants have applied silk cocoons on their face for a time period of four months and gave their responses in the form of questionnaire. For statistical analysis, Chi square test of association was applied on all survey-based data. The tests result of SericinPro body lotion indicated that it meets all the standards of testing as pH ranges from 5.5-7.9, no skin irritability was detected, total moisture count was 85%, total microbial content was less than 10%. The survey based results indicated that overall customer satisfaction level is 100% and both of the products are safe to use for human skin. All participants recommend the use of SericinPro body lotion and anti-aging facial massage cocoons as they provide many dermatological benefits to their skin including removal of dry as well as dead skin, reduction in wrinkles, provides smoothness to skin, moisturizing effects and protection from sun damage. It can be concluded that utilization of silk sericin in cosmetic products formulations could become a best alternative to already available hazardous synthetic products in the market.

**Keywords:** Silk sericin, organic cosmetic, anti-aging benefits, moisturizing lotion and facial massage silk cocoons.