



*Research Paper*

## **A NOVEL APPROACH FOR PREVENTION OF EXFOLIATION PROBLEMS ASSOCIATED WITH IMPORTED DUPION SILK YARN**

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### **ABSTRACT**

The imported dupion silk yarns produced by different silk mills, were noticed to exhibit various degree of exfoliation defect when subjected to conventional degumming. To address this problem, degumming with recipes prevailing in the silk processing industry as well as pressurized degumming by varying the temperature and duration were carried out on an experimental basis. Silk yarn samples degummed under pressurized conditions were more lustrous in appearance and revealed improvement in fullness when compared with the yarn degummed by the conventional process. Further, evaluation of mechanical properties such as tenacity and elongation of the yarn samples degummed by using various recipes including pressurized degumming did not show any significant difference. The degummed yarn samples were further dyed in dark shades and converted into dupion fabrics and evaluated for the defect by the subjective analysis. The results, hence, reveal that the pressurized degumming under controlled conditions can avoid the exfoliation defects bound to happen with silk yarn samples under conventional degumming.

**Key words:** Dupion silk, exfoliation, HTHP degumming, luster.