A STUDY ON EXTRACTION AND APPLICATION OF ECO – FRIENDLY NATURAL DYE EXTRACTED FROM LEAVES OF *ACALYPHA INDICA* LINN ON SILK FABRIC

P. SARAVANAN[1], G. CHANDRAMOHAN[2], P. SHANMUGA SUNDARAM[3]& P. SUMATHI[4]

[1]Department of Chemistry, Kings College of Engineering, Punalkulam, Thanjavur, Tamilnadu, India

[2]Department of Chemistry, A.V.V.M Sri Pushpam College, Poondi, Thanjavur, Tamilnadu, India

[3]TÜV Rheinland Bangladesh Private Limited, Gulshan-2, Dhaka, Bangladesh

[4]Department of Chemistry, BNM Institute of Technology, Bangalore, India

ABSTRACT

The present investigation was carried out to revive the old art of dyeing with natural dye from leaves of *Acalypha indica* Linn. It is belongs to family Euphorbiaceae, commonly known kuppaimeni. The dye has good scope in the commercial dyeing of silk in garments industry. In the present study, degummed silk fabrics were dyed with chemical and natural mordants. Dyeing was carried out by pre-mordanting, post mordanting and simultaneous mordatning. The dyed samples have shown good washing, light, rubbing fastness and perspiration fastness properties. The various colour changes were measured by computer colour matching software. ICPMS studies have proved that, heavy metals such as antimony, arsenic, cadmium and lead were not present in the dye extract. Anti-bacterial and anti-fungal activities of the dye were also studied.

KEYWORDS: Extraction, Natural Dye, Leaves, *Acalypha indica Linn*. Silk, Textiles