



## **Printing (Cotton/Polyester) Blended Fabrics with Curcumin Extract Part. I. Optimum Conditions for Printing<sup>#</sup>**

Y. H. El Hamaky<sup>1</sup>, E. S. Badawy<sup>1</sup>, Dalia Fekry<sup>1</sup>, S. Shakra<sup>2\*</sup>

<sup>1</sup> *Textile Printing, Dyeing and Finishing Department, Faculty of Applied Arts, Helwan University, Giza, Egypt;*

<sup>2</sup> *Textile Research Division, National Research Centre, Dokki, Giza, Egypt*

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**Abstract:** Results obtained from this work can be classified as follows:-

- 1- Optimum conditions of extraction process:  
Extraction of curcumin powder
  - a- By cellulase enzyme.  
The color strength (K/S) of the printed samples increased by increasing storage time and reached its maximum after 1.5 hours. By further increment in storage time, a decrement was observed in K/S.
  - b- By soaking in water.  
K/S of the printed samples increased and reached its maximum after 24 hours
- 2- Factors affecting printed samples:
  - I- Effect of natural mordant
    - a- The mordanted printed samples had higher K/S than unmordanted one
    - b- Mordanting during printing gives the best results
  - II- Effect of pH level K/S of the printed samples increased with the decrement in pH level of the printing paste (with or without mordant ) and had its highest value at pH 5
  - III- Effect of steaming temperature. K/S of the printed samples increased by increasing steaming temperature above 120°C, while the samples brilliance decreased.
  - IV- Effect of steaming time. K/S of the samples increased with increasing the steaming time above 30 minutes.

**Keywords:** *Printing, natural dyes, curcumin extract, cellulase enzyme, natural mordants*

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\* Corresponding: E-Mail: [dr\\_shakra@yahoo.com](mailto:dr_shakra@yahoo.com); Tel: 0244632854

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