ABSTRACT

In this study, conductive cotton and polyester composite fabrics were produced by chemical polymerization of aniline on fabrics.

Variation of rates of conductivities were examined at the different rates of aniline and stable temperature, humidity. Fulard Machine was used for coating fabrics with conductive polymers. Four tests were tried using four different concentrations of aniline in production of composite fabrics coated conductive polymers. In these tests, aniline as monomer, (NH₄)₂S₂O₈ as oxidant, Kieralon ED-B as surfactant, HCl as acid were used. Also AgNO₃ was added in aniline solution for increasing conductivity. Finally, electrical properties of produced composite fabrics were measured and images of SEM of them were examined to observe polyaniline ratio of holded onto fabrics and the polyaniline distribution of the fabric surfaces.
Key Words:

Polyaniline, Electrical conductivity, Chemical polymerization, Cotton, Polyester.