

Improving the structural and functional properties of Dining Tablecloths using Modal and Tencel materials

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Abstract

The textile industry produces furnishing fabrics, so it is considered one of the fabrics that are presented to the consumer, and it is considered one of the important textile products that cannot be dispensed with in all homes because of its great aesthetic and functional importance for creating color harmony for home decorations. The fabrics used in the dining tablecloths must be characterized by standard specifications in order to suit the use by using appropriate mixing ratios and raw materials to achieve the functional purpose and have the ability to absorb liquids and resist fungus and bacteria and resist tensile strength and elongation. Modal and Tencel fibers meet the requirements for dining tablecloths, and among these properties are the absorption of liquids as soon as they fall on them, in addition to the resistance of these fibers to bacteria and fungi. The research aims to improve the structural and functional properties of dining tablecloths using two raw materials, modal and feathering, by reaching the best raw material and the best mixing ratio. Nine samples were produced with Hanicom weave composition, with five mixing ratios according to the number of edging modal for cotton, and mixing ratios according to the number of edgings. For cotton, about the following (100% Cotton, 75% Cotton: 25% Modal, 50% Cotton: 50% Modal, 25% Cotton: 75% Modal, 100% Modal), (75% Cotton: 25% Tencel, 50% Cotton: 50% Tencel, 25% cotton: 75% Tencel, 100% Tendon). Various tests were conducted on the produced fabrics, measuring hardness resistance, thickness test, and weight per square meter, tensile strength, elongation, and moisture absorption. Most of the samples achieved the required results.

Keywords:

Modal fibers - Tencel fibers - Hanicom - Table linens