

The Effect of Warp and Weft Color Variants on Some Aesthetical and Functional Properties for Three-layer Fabrics

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Abstract :-

The multi-layered fabrics have both natural and mechanical properties that effect the final use of the product, These layers are either separate or coherent with each other and this is commensurate with the requirements for its use, It is used for various purposes such as bed covers, tables, fabric coats, curtains, and in making some types of blankets , and in its fabrics the tents of camps and festive tents, It is also used in industrial fields such as cementing the soil with layers of geotextiles, and in lining drainage pipes, and in filters to filter the water to prevent pollution, and also in sound insulation and heat insulation, And within these fabrics are the three-layered fabrics where three warps are used, Which are exchanged in special places with three wefts to obtain patterns or fabrics with different effects, There are several methods of creating color effects with fabrics using colored yarns and wefts arranged in aspecial order in the warp and the weft or both, The color effect is one of the most important factors that affect the appearance of the woven fabric, and it gives different shapes, Where a table was made showing the maximum number of effects that can be obtained for multi-layer fabrics (triple) in the event that the warp color arrangement is fixed and the weft colors are different. Taking into account the stability of the Fabric Structure used, which is plain(1/1) in all layers, where the research interest in mathematics study of Structural composition of yarns and fabrics .To be a reference for textile designers to save time and effort .

Keywords:-

Double Weaves - Treble Cloth Weaves - Colour Effects – Fabric Structures – Warp and weft colors.