The Effect of Textile structure on the Comfort and Protection Properties of a Clothes (Cloth masks)

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Abstract: The purpose of the present research is to study effect of textile structure (Coverage factor and the type of fabrics) on the comfort properties (breathability) and protection properties (resistance to fluid permeability and pores size). Whereas, woven and knitted fabrics were used in the research samples. The Results of air permeability (breathability) showed that the textile structure has a great impact on the breathability property of both woven and knitted fabrics, as the higher the density of the threads at a certain limit in the warp and weft directions in woven fabrics and the number of rows and columns in knitted fabrics, the air permeability and breathability decreased. The results also indicated that the higher the coverage coefficient, the lower the porosity, and consequently the higher the particulate filtration efficiency and thus the increase in the protection coefficient. The results also indicated that knitted fabrics are better than woven fabrics when used to make cloth masks.

Keywords:  
Cloth mask, Textile structures, Air Permeability (Breathability), Spray Resistance, pores size

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