

Designing high-efficiency cap to protect hair from weather pollutants

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Abstract

Wearing hats and caps in sunny areas to protect from sunrays is frequent in hot areas or as a requirement for fashion lines, especially in summer and spring times. A number of fabrics were woven, their permeability properties were measured, and the extent to which they protected hair from airborne dust and sunlight, by measuring the porosity of the tested fabrics. The best tested fabrics for permeability and porosity were selected and coated with copolymer to increase protection from the sun's rays by measuring the sun protection factor (UPF) using diffuse transmission spectrophotometer. Cap was designed using Gerber software. The results showed that choosing the appropriate fabrics in the manufacture of hats and caps prevents damage to the hair.

Keywords

Hair, Air pollution, UPF, Carbon fiber, Porosity, Permeability, Cotton.