**Abstract**

The aim of research is to apply experimental study to use smart textile fibers to produce fabrics with special functions suitable for bed sores. CoolmaxfreshFX with ionic silver which treated as antibacterial was used to achieve this purpose and produce 16 fabric samples with count yarn 24/1 Ne, with two levels of twist/meter with 750/m and 850/m for warp threads and weft yarns.

Tested according to standard specifications to evaluate the important properties as tensile strength, air permeability, pilling resistance, and water absorbency.

Summary of search results:
- Air permeability of coolmaxfreshFX fabrics with high twist 850/m is higher than its similar with low twist 750/m.
- The water absorbency for some samples reached to four times of its weight, although its time of absorbency not exceed more than 45 seconds.
- The best sample in this experimental trial was number 10, which had 67.59% of properties quality.

It is recommended to develop the functional fabrics for bedsores, especially which produced from smart textile fibers to improve their properties depending on special standards.

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