Wicking properties of gauze for infant products

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Abstract

Gauze is an excellent material for infant product and has have attracted great attention in baby care market. This study aims to identify the wicking property of the gauze fabric in baby care products, and to analyse the relationships between the wicking ability and fabric structure of baby soft gauze products. Wicking properties were evaluated by (i) Horizontal Wicking of Textiles (AATCC Test Method 198) and (ii) Vertical Wicking of Textiles (AATCC test Method 197). Experimental results revealed that a significant difference occurred for the gauze in the wicking ability. The fibre content and structure of fabric were the major parameters that affects the wicking ability.

Keywords: horizontal wicking, vertical wicking, infant, baby care, gauze

Content:

With the rapid development of baby apparel market, the demands for the standards of wear comfort and safety on infant apparel have been increased. The multi-functional gauze products become one of the main focuses in baby care market. Gauze is an excellent material for infant apparel and has attracted great attention in baby care market. The market share of gauze products for baby has been significantly increased due to its distinct advantages of gauze-structured fabrics. High quality and safety are the priorities of infant's apparel, and thus they must be subjected to serious evaluation and measurement before launched to market.

This study aims to identify the wicking property of the gauze fabrics in baby care products by comparing the current brands of infant gauze products in marketplace. A total of 9 gauze products, including cotton gauze and bamboo gauze from the famous infant supplies available in the market were investigated.

The counts of fabric and yarn of gauze samples.

No.	Fabric count	Yarn count (Tex)
1	51x43	13.9
2	43x39	13.4
3	41x39	12.0
4	60x39	13.0
5	41x40	13.9
6	60x41	27.4
7	58x40	13.7
8	54x44	13.4
9	57x38	23.0

Wicking results of gauze samples

No.	Horizontal wicking rate (mm^2/s)	Vertical wicking rate (mm^2/s)
1	203.8	0.76
2	162.5	0.79
3	219.0	0.74
4	196.5	0.65
5	276.6	1.77
6	N/A	N/A
7	126.9	0.44
8	N/A	N/A
9	144.9	1.12

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