

### STUDY ON THE COMPRESSIBILITY OF FABRICS

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Twenty-five fabrics (wool blend and rayon blend) varied in their thickness were to test their compressibility with two different levels of load (10gf/cm<sup>2</sup> and 20 gf/cm<sup>2</sup>).

Compressional measurements were done by KES-F3 with the speed of 0.02mm/sec.

Each fabric was measured three times to achieve

- 1) linearity of compression thickness curve (LC),
- 2) compressional energy (WC),
- 3) compressional resilience (RC),
- 4) thickness at the pressure of 0.05 gf/cm<sup>2</sup> (To),
- and 5) thickness at maximum pressure (Tm).

LC and WC were in the positive relationship, but LC under high pressure was smaller than LC under low pressure, which meant the thickness of fabrics pressed under high pressure decreased more radically. LC and WC increased as thickness of fabric (To) increased, and the slopes were different according to the pressure applied to the samples. Usually, LC had less reproducibility than WC or RC. As the thickness of fabrics increased, RC increased to a certain point and then decreased. This meant the long surface hairs of fabrics resulted to weaken the ability of recovery from compression and therefore the fabrics had less instant recovery from compression than other fabrics of short surface hairs.