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Conference Chairs

Pr. Dominique Adolphe, Pr. Laurence Schacher, Dr. Nabyl Khenoussi
Ecole Nationale Supérieure d'Ingénieurs Sud-Alsace

Venue

*University of Haute-Alsace
Ecole Nationale Supérieure d'Ingénieurs Sud-Alsace
Mulhouse, France*

ENSISA – Werner 11 – rue Alfred Werner – Mulhouse

Program

Tuesday, May 24

1:00 PM–5:00 PM

5:00 PM–7:00 PM

Governing Council Meeting: Mechanic Meeting Room, Room 355

Early Bird Registration and Reception: ENSISA Werner Bldg. (**B** on map) – Workshop Lane

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Lexicon for Sensory Evaluation of Tactile Textiles in Brazil

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INTRODUCTION

The space between clothing and the body is related to users comfort. Due to the priority to protect man from a particular hazard, the interaction between clothing and body comfort as well as structural properties of materials to be used in clothing manufacturing is often neglected. Indeed, comfort is one of the most important properties that influence the users decision when choosing a particular piece of clothing. [1].

Touch is one of the most used practice by the consumer to verify the comfort of the fabric. Thus, the touch is a tool to assess the quality of high sensitivity fabrics. [2] [3]

Investigations were carried out in France and Portugal in order to quantify the quality of touch textiles. The researchers used the sensory analysis method much exploited by the food industry and cosmetics and developed lexicons for tactile sensory evaluation in textiles. [3] [4]

The development of a lexicon for tactile sensory analysis is an important tool for tactile evaluation of products. For its development a selection of samples representing the product is performed and the development of protocols to be followed systematically by evaluators generate the terms and quantitative or qualitative validation. [5] Thus, this article presents the procedures used for the development of the Brazilian textile lexicon.

MATERIALS AND METHODS

Panelists

Fourteen assessors (five men and nine women) participated in these study. They were selected through triangular tests from ABNT NBR ISO 4120 [6]. In Brazil there are no sensory assessors in textiles, so it was necessary to select volunteers to form panelists.

Samples

20 samples of 57 collections of caps manufacturing industries in the Apucarana city were used. Each sample was cut into a dimension 20X20 centimeters and received a three digit numerical identification. They were fabric and knitted textures and different structures composed of natural and synthetic fibers

such as linen, cotton, silk, viscose, polyester, polyamide, etc (Image 1)



Image 1: Fabric samples

Procedure

Procedures for the development of the Brazilian textile lexicon for tactile evaluation were adapted from ISO 11035 [7]. Sensory Assessors touched fabric samples arranged behind a cabin and an evaluation described the feelings to touch the samples. (Image 2)



Image 2: Assessment cabin

Assessors described the feelings at the first touch of the right side, then the reverse side and then lifted the sample holding the fabric with both hands. (Image 3)



Image 3: Samples touch

RESULTS AND DISCUSSION

299 terms were generated. After that evaluators were gathered to remove from the lexicon the irrelevant terms, leaving just 171 terms.

Again evaluators were gathered and grouped the terms of same meaning. The resulting terms were gathered in 21 representative groups shown in table 1

RELIEF	PLUSHY	FINE FABRIC
ROUGH	FRESH	THICK
HARSH	HOT	FLUIDITY
CRUMPLED	RIGID	FIT
SMOOTH	ELASTICITY	SUAVE
HEAVY	SOFT	SLIPPERY
DRY	LIGHT	ICTCHES

Table 1: Initial lexicon

CONCLUSION

The lexicon in this study was made to assess the comfort of textile materials. The initial lexicon with twenty-one terms was generated by Brazilian panelists from textile samples collected in the city of Apucarana. This initial lexicon will still be validated by quantitative and qualitative methods.

After validation a panel of experts in textile sensory analysis will be used to quantify the tactile comfort of textile materials. Furthermore it can be used by other sensory panels.

KEYWORDS

Lexicon Textile. Sensory analysis. Hand feel.

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