

Title of the project: TEXDERM - Comfortable textiles and clothing fulfilling specific needs of kids with skin problems

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Summary of 2019 results

Title of the presentation: Clinical testing of clothes for kids with skin problems

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Two types of textile fibres have been prepared for clinical testing at the Institute of Cotton Research (VUB, a.s., Ústí n.O.): lyocel (Tencel)/polypropylen Ag+ (POP) and viscose Viloft/micromodal.

Technical University (Liberec) laboratories assessed their physical properties with the main stress on permeability, heat conductivity, sensoric comfort and permeability for water vapour. Also the washability using commercial soap powders of each textiles was performed after staining the clothes with common dermatological topical ointments.

Some antimicrobial properties have been established by exposition to 2 bacterial strains and Candida yeast. Results of antifungal resistance tests are still expected.

As the ready-to-wear sample were chosen pyjamas with flat seams in natural colour pretreated by washing. Four sizes of pyjamas were prepared for testing in children aged 3 to 12 years according to the Study protocol for 2 months in each child (Dept.of Dermatology, Medical Faculty in Hradec Králové). Clinical examination of the skin and skin microbiom was monitored before and after wearing tests. Also some physical properties for each textile material were assessed.

Results: There were very good tolerance (without any irritation) of tested clothes in all children. Textiles made from Tencel/POP Ag+ had a high tendency to lumping. Viloft/micromodal pyjamas were very wispy and had a tendency to shrink and loose a shape.

Conclusion: We will continue clinical testing of prepared samples of pyjamas. But some new textile materials are needed. Especially fine flax fibres are very promising for their toughness, natural origin and ability to absorb water.

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