



CONTACT DERMATITIS AND OCCUPATIONAL DERMATOSES

## EVALUATION OF SKIN IRRITATION POTENTIAL CAUSED BY WIPING OF LOTION TREATED DRY TISSUE

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**Introduction :** One of the ideal components of dry tissue is minimizing damage to the skin. Friction is considered as one of the most important causes of the skin damage resulting from dry tissue cleansing.

**Objective :** To compare the clinical benefits of a novel bath tissue designed to deliver a glycerin-based formulation continuously to the skin during use in sensitive and non-sensitive skin groups.

**Materials and Methods :** A total of 44 females, including 22 women with sensitive skin and 22 women with non-sensitive skin were included for this study. Subjects applied the product A (lotion treated tissue) and B (non-lotion treated tissue) by 24 cycles of manual rubbing on their forearm. Clinical data from repetitive forearm wiping study was obtained by measuring transepidermal water loss (TEWL) and laser doppler perfusion image (LDPI) before the test, 10 minutes after the test.

**Results :** After repetitive wiping clinical test, all groups showed elevation of TEWL value. And the elevation of TEWL by application of non-lotion treated tissue was significantly high in both sensitive and non-sensitive skin groups. The microvascular blood flow measured by LDPI was increased after repetitive wiping test in both groups. The increase of microvascular blood flow after the test of lotion treated tissue was significantly lower than that of non-lotion treated tissue in sensitive skin group. However, there was no significant difference of blood flow increase between lotion treated tissue and non-lotion treated tissue in non-sensitive skin group.

**Conclusions :** The novel dry tissue which is treated with glycerin based formulation had clinical benefits compared with non-treated dry tissue. And this result was more obvious in sensitive skin.

