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Activity Of An Intimate Hygiene Cleanser Against Vulvovaginal Candidiasis

Franco Gasparri¹, Claudio Benvenuti², Vincenzo De Leo³ and Andrea Zanardi⁴ ¹University of Salerno, Italy ²⁴Mylan, Milano, Italy ³University of Siena, Italy

Introduction: Candida is usually present in the vaginal microbioma in which lactobacilli (LB) are predominant. Its growth is controlled by LB function. An imbalance in LB production leads to an overgrowth of yeast, and the occurrence of vulvovaginal candidiasis. This is a vaginal yeast infection, a common female condition, caused by Candida species, associated with intense itching, swelling, and irritation. Candida infection frequently relapses. Different formulations of detergents for feminine intimate hygiene are available, and their antimicrobial and pharmacological activity need scientific evidence supporting the claim.

Aim: This study evaluated the effect on Candida spp. of a cleanser indicated for feminine hygiene, with active ingredients from plant extracts in a mucous-adhesive system at acid pH (SAnew) compared with a reference cleanser (C) based on traditional surfactants in a double blind design.

Methods: The main components of the tested formula are: the microbiologically active *Thymus vulgaris* extract and Zinc Coco Sulfate, and Xanthan Gum and *Chondrus Crispus* extract, mucous-adhesive agents. The anti-mycological activity of the products described below was evaluated in 12 strains of Candida spp. isolated from vaginal swabs from women with vaginitis, and in two strains from the American Type Culture Collection (ATCC-MYA 276 C. glabrata, ATCC-24433 C. albicans) belonging to the same species as the wild samples.Quantitative testing determined the minimum inhibitory concentration (MIC), i.e. the lowest concentration at which an absence of visible growth is observed and expressed in % of product using the broth microdilution test.

SAnew ingredients: Aqua, Zinc Coco Sulfate, Propylene Glycol, Glycerin, Disodium Capryloyl Glutamate, Lactic Acid, Caprylyl Glycol, Xanthan Gum, *Thymus vulgaris* (Thyme) Extract, Coco-glucoside, Glyceryl Oleate, *Chondrus crispus*, α-Ketoglutaric Acid, Sodium Benzoate.

Results: MIC values (14 strains of Candida spp) showed a statistically significant difference (p=0.034 at Student's t test one-tail) in favour of SAnew.

SAnew MIC: 0.18%±0.01. Reference cleanser (C) MIC: 0.29%±0.05.

Conclusion: Detergents for feminine intimate hygiene should have effective formulations for maintaining genital health and preventing bacterial and fungal contamination. The data here presented suggest that formulation tested have inhibitory activity against Candida albicans and Candida glabrata.

Biography

Franco Gasparri graduated from the University of Bologna in Industrial Chemistry, here after improving his knowledge for cosmetics at the University of Urbino and Ferrara, whereby he attended specialised courses in Phytochemistry, Herbalist, Chemistry and Cosmetic Technology. After thirty years in the cosmetic sector, Franco now has extensive experience in the field. He has further worked in other sectors such as Research & Development, Quality Control, Technical Management and General Management of cosmetic and pharmaceutical companies. Currently he is a professor at the University of Salerno within the Pharmacy Faculty, teaching Master level students in Cosmetic Science and Technology. Moreover Franco Gasparri is the author of several academic articles published in both national and international journals, in addition to presenting at scientific congresses.

info@gasparrifranco.it

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