## 16<sup>th</sup> European Dermatology Congress

June 07-08, 2017 Milan, Italy

## Mucoadhesive properties of an intimate hygiene cleanser against vulvovaginal candidiasis

Franco Gasparri<sup>1</sup>, Claudio Benvenuti<sup>2</sup> and Andrea Zanardi<sup>3</sup> <sup>1</sup>University of Salerno, Italy <sup>2,3</sup>Mylan, Milano, Italy

**Introduction:** The vulvo-vaginal cavity can be the site of various fungal and bacterial infections that can be successfully treated by a local administration of anti-infective and/or anti-inflammatory drugs. A prolonged contact of the formulation on vaginal mucosa permits to increase drug efficacy. Also cosmetic products or medical devices containing lenitive or pH regulating ingredients intended for vaginal application can benefit of a prolonged contact with the mucosa. The capability of mucoadhesive formulations to adhere to mucosal substrates is due to the presence of specific polymers. The associations of Xanthan gum with lambda carrageenan from *Condrus crispus* were characterized by the highest mucoadhesive potential in a previous published studies.

**Aim:** The aim of our study is to evaluate the mucoadhesive potential 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 mucous-adhesive system (*Condrus crispus* and Xanthan gum), the microbiologically active *Thymus vulgaris* extract and Zinc Coco Sulfate. In the used model the mucoadhesivity can be determined by assessing the percentage of inhibition of the lectin-binding glycoprotein according to Patela and al. 19992 (Image). The mucoadhesive capacity is expressed according to the equation: Mucoadhesion % of the product = (1 – abs product/abs control) x 100. Mucous cells used: EpiVaginal kit VEC-100, MatTek Corporation.

**SA new 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:** Mucoadhesion values showed a statistically significant difference (p=0.01) in favor of SAnew at two dilutions (1:2;1:5) tested (Image).

**Conclusion:** The results obtained show that the product tested has a significant high mucoadhesive activity to the vaginal mucous membrane versus the reference cleanser. The mucoadhesion also remains high even when the formulation was progressively diluted

## 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

Notes: