

## Male Grooming

1st Published in SPC - 2016

John Woodruff

The most obvious difference between male and female facial skin is male hair growth. As a cosmetic formulator the author's main concern with facial hair has been its removal and treatment of the owners' skin, however it also has social implications. According to an article in Social Science Quarterly [Ref 1] facial hair makes men appear overly masculine, having strong support for use of violence and little support for feminist views. The context was for political candidature and it argues that facial hair makes candidates less attractive for women and feminists.

Even if not standing as a political candidate whether to be clean shaven or bearded is a personal choice and often dependent on what the man considers will make him more attractive. An article in the Journal of Evolutionary Biology discusses how facial masculinity and beardedness interact to determine women's ratings of men's facial attractiveness [Ref 2]. Using Photoshop male photos were presented as clean-shaven, light stubble, heavy stubble and full bearded and their attractiveness commented on by a panel of 8,699 females. It was found that light and heavy stubble faces were more attractive than either full beards and clean-shaven faces. Paradoxically, clean-shaven faces were judged as more attractive for short-term relationships whereas beards were judged as more attractive for long-term relationships.

Whether standing for political office or wishing to attract a partner, shaving is the most common cosmetic practice in men. The male facial skin is heterogeneous in morphology and roughness, and male skin has a tendency to heal slower and to develop hyper-inflammatory pigmentation. In addition, many males exhibit sensitive skin, with the face most often affected. Finally, the hair follicle is a sensory organ, and the perifollicular skin is highly responsive to external signals including mechanical and thermal stimulation. This makes perifollicular skin a highly responsive and inflammatory system, especially in individuals with sensitive skin. Activation of this system, by shaving, can result in shaving-induced skin irritation and techniques commonly employed to avoid shaving-induced skin irritation include pre- and post-shave skin treatments. [Ref 3]

Beard hairs have more cuticle layers than scalp hairs and as a consequence, their diameter is twice that of scalp hairs and more force is needed to cut them [Ref 4]. Beard hair, when dry, shows a high stiffness and has been claimed to be equivalent to a copper wire of similar diameter, with respect to the forces needed to cut it. Hydration can reduce the stiffness of beard hair by about 20% within the first minute of water contact and after four minutes, the cutting force is reduced by 40% but does not significantly decrease further with longer hydration. This would indicate that a good shaving product should impart a high degree of moisturising to the beard hair as well as providing razor glide.

DUB 810C from **Stearinerie Dubois** is marketed as a replacement for isohexadecane and silicones to improve razor glide and improve skin's moisture levels. It is the ester coco caprylate/caprate, and its non-oily nature and high degree of spreadability make it especially suitable for males who suffer from over-production of sebum.

the number of men claiming to have sensitive skin is substantial [Ref 5]. In self-assessment surveys, about 40% of men rate themselves to have sensitive skin and one-third of men report having experienced a skin reaction to a personal care product in the past. Important factors which influence the incidence of perceived skin sensitivity include environmental factors and increased use of cosmetic products. Additionally, male skin has been reported to exhibit slower wound healing and lower re-epithelialization capacity as compared to female skin. This suggests that pre-and post-

## Male Grooming

1st Published in SPC - 2016

John Woodruff

shaving products would benefit from the inclusion of anti-inflammatory and wound healing ingredients.

Pentavoitin from **DSM** is an aqueous solution of saccharide isomerate claimed to soothe and calm irritated skin and to provide up to 72 hours moisturising after topical application of an emulsion containing 3% Pentavitin. Also from **DSM** Iricalmin PF is an aqueous solution of panthenol, disodium cocoamphodiacetate, Triticum vulgare (wheat) germ extract, Saccharomyces cerevisiae extract, sodium hyaluronate and PVP for calming irritated skin, reducing redness and improving moisture content.

Inka Drago [INCI: Propanediol, aqua, croton Lechleri] from 3QP is described as a unique natural ingredient from the Amazon Rainforest. Also known as Dragon's Blood, Inka drago is obtained from the resin of the Croton lechleri tree and has been used by the Amazonian natives since ancestral times for its great healing power. Rich in proanthocyanidins and taspine, Inka drago promotes the formation of new collagen and is able to reconstruct the links between collagen fibres to stimulate scab formation and wound contraction, making it an interesting healing aid for shaving and post-shave products.

Glutathione (GSH) is a tripeptide and is the only antioxidant that cells are able to produce by themselves. GSH participates directly in the neutralisation of free radicals and regenerates vitamins C and E keeping them in their active forms. GSH also plays a prominent role in DNA protection and in modulating inflammatory processes. It has also been reported that glutathione reduces melanin production by suppressing the activity of tyrosinase.

GSH-Defense from **Phenbiox** [INCI: Hydrolyzed Eruca sativa leaf] is obtained by enzymatic hydrolysis of rocket salad, releasing its active molecules in their bioavailable and biologically active form. GSH-Defence soothes and calms irritated skin and is able to effectively promote the synthesis of glutathione in skin to help cells strengthen their natural defences against radical related stress by increasing their endogenous antioxidant capacity.

Beards are still in vogue and beard oils are very popular, however men are also conscious of oily skin therefore a beard oil using Desert Whale Jojoba Esters -15 or -20 from **Vantage** can provide an elegant smooth finish while enabling oil-free claims to be made. Unlike triglyceride oils, jojoba esters provide non-greasy emolliency and are readily absorbed into the skin. Jojoba Esters-15 is a liquid ester that delivers emolliency and a smooth, elegant feel. Jojoba Esters-20 melts slightly above body temperature, providing glide along with a soft texture to skin care formulations and, unlike many synthetic fatty esters, Jojoba Esters-15 and Jojoba Esters-20 do not affect the foaming of surfactant systems, making them of interest for shave foam and gel applications.

Clear Palm Wax [INCI: Ditrimehylolpropane tetra palm kernelate] from **Global 7** is a vegetable derived wax made using renewable palm kernel acids and a high molecular weight alcohol. It can be used to thicken both the mineral and vegetable oils that are used to care for the beard. Another **Global 7** material is Global 4075 [INCI: Glyceryl isostearate, caprylic/capric triglycerides], which may be combined with sodium stearate to thicken non-polar oils.

For those men who are looking to shave off their beard then the skin underneath the beard can be in quite poor condition, therefore a pre-treatment before the shave can help to promote the health of the skin underneath. **Arch Personal Care** recommends using Genti-Fol SA [INCI: Beataine salicylate], which combines the benefits of salicylic acid with the skin improvement properties of trimethylglycine (betaine). It is claimed to provide mild exfoliation and antimicrobial properties

## Male Grooming

1st Published in SPC - 2016

John Woodruff

blended with substantial moisturising and anti-irritation claims. SalSphere Health Scalp from **Salvona** is a time release delivery system of salicylic acid with multiple botanical extracts that is designed to aid in the relief of itchy scalp and reduce the appearance of scaly, flaky skin. It is also suitable for the care of skin hidden beneath a beard

All involved in the cosmetic industry know about the visible signs of ageing but these are normally related to females. However, there are age-related differences in male skin and a paper in Skin Research and Technology [Ref 6] compared that of 18-32 year olds with that of 58-74 year olds. It was found that there was a significant decrease in the size of lipid droplets among older men. Likewise, significantly lower numbers of lipid crystals were present in this group. In contrast, microbial presence was significantly increased in the older group and there was also a trend towards more abundant corneocyte desquamation among older men. Another study [Ref 6] found that Until the age of 50 men's TEWL is significantly lower than the water loss of women of the same age and young men show higher SC hydration in comparison with women. But, whereas SC hydration is stable or even increasing in women over lifetime, the skin hydration in men is progressively decreasing, beginning at the age of 40. Across all age groups, the pH value in men is below 5, the pH value of female subjects is generally higher than 5. This would suggest that as men age their skin becomes drier and would benefit from regular desquamation and the use of moisturising and emollient products.

PAE Complex Oil Control from **Biosil** contains phytic acid to provide gentle keratolytic effects and aid in cell turnover and Aloe barbadensis leaf juice, known for its healing and soothing properties. It contains a unique combination of amino acids, vitamins, minerals and enzymes which aid in keeping skin supple and in addressing issues like acne or eczema. Aloe Vera can relieve itching, inflammation and provide moisturising benefits. Proper exfoliation helps in maintaining healthy skin by removing the barrier of dead skin cells to uncover fresh new ones to provide many benefits such as the reduction of clogged pores and breakouts and increased collagen production. Fine lines are softened and appear less noticeable, dryness and flakiness are greatly reduced, and skin appears smoother with a more even-toned complexion.

**Greentech** markets Biotilys [INCI: Lactobacillus ferment lysate] as an ingredient to help skin protect itself from external aggressions and to accelerate cutaneous barrier recovery. Topical application of a 2% solution of Biotilys was shown to reduce TEWL and to increase skin moisture levels and skin radiance plus it improved the skin barrier function, helped repair the skin barrier function and reduced shine.

The traditional after-shave product comprising mainly alcohol and water was notable for its cooling action: a more gently way of providing it is by using Frescolat from **Symrise**. HydroSal SalCool from Salvona is a neurocosmetic that provides the perception of freshness without physically dropping the temperature of the skin and without menthol odour. It enables extended time-release performance because ingredients act in a non-competitive manner on the different sensory nerve endings of the skin. Its principal components are methyl diisopropyl propionamide, menthyl lactate and ethyl menthane carboxamide.

## Male Grooming

1st Published in SPC - 2016

John Woodruff

Ref 1 Herrick, R., Mendez, J. M. and Pryor, B. (2015), Razor's Edge: The Politics of Facial Hair. *Social Science Quarterly*, 96: 1301–1313. doi:10.1111/ssqu.12183

Ref 2 Dixon, B. J. W., Sulikowski, D., Gouda-Vossos, A., Rantala, M. J. and Brooks, R. C. (2016), The masculinity paradox: facial masculinity and beardedness interact to determine women's ratings of men's facial attractiveness. *J. Evol. Biol.* doi:10.1111/jeb.12958

Ref 3 Maurer, M., Rietzler, M., Burghardt, R. and Siebenhaar, F. (2016), The male beard hair and facial skin – challenges for shaving. *Int J Cosmet Sci*, 38: 3–9. doi:10.1111/ics.12328

Ref 4 Tolgyesi, E., Coble, D.W., Fang, F.S. and Kairinen, E.O. A comparative study of beard and scalp hair. *J. Soc. Cosmet. Chem.* 34, 361–382 (1983).

Ref 5 Vanoosthuyze, K., Zupkosky, P. J. and Buckley, K. (2013), Survey of practicing dermatologists on the prevalence of sensitive skin in men. *Int J Cosmet Sci*, 35: 388–393. doi:10.1111/ics.12056

Ref 6 Chalyk, N. E., Bandaletova, T. Y., Kyle, N. H. and Petyaev, I. M. (2016), Age-related differences in morphological characteristics of residual skin surface components collected from the surface of facial skin of healthy male volunteers. *Skin Res Technol*. doi:10.1111/srt.12321