

## Unique Physiology of Male Skin and Aromatic Skincare

In response to the growing needs of skincare among men in recent years, Shiseido has recently conducted surveys in Japan and France regarding the unique physiology of male skin. Survey results revealed that men's skin has excessive sebum levels in comparison with women's skin. On the other hand, men's skin has higher moisture evaporation rates, thereby causing a decline in the barrier function, which makes the skin's texture prone to roughness. Additionally, the shaved areas on men's faces are especially affected by such problems as a decline in barrier functionality and tend to have more skin troubles in comparison with non-shaved areas.

Shiseido researchers also confirmed that smelling fragrance ingredients with sedative effects alleviates mental stress, which in turn has remedial effects on improving barrier function deterioration in relation to the unique characteristics of men's skin.

Shiseido is developing prestige men's skincare products targeting men around the world by applying these findings.

## The Physiology of Male Skin

While many men mention that they have skin problems, including oily skin and a tendency to have rough and dry skin, there is less information regarding skincare for men in comparison with skincare for women; therefore, the current situation is that it is not as easy to provide appropriate care for their skin. In addressing such problems, Shiseido has conducted in-depth surveys in Japan and France among men in their 20s to 50s with regard to the physiological characteristics of male skin. (Surveys were conducted in March 2003 and targeted 90 Japanese males and 80 French males.) Survey results revealed that both

Japanese and French males have (1) excessive sebum levels, (2) higher moisture evaporation rates, leading to a declining barrier functionality, and (3) as a result of excessive sebum levels and higher moisture evaporation rates that lead to a declining barrier functionality, men's skin becomes more prone to dryness and roughness in comparison with women's skin. Of particular note, the survey revealed that the shaved areas on men's faces have a declining level of Cornified Envelope (CE) maturity\* than other facial areas; therefore, daily shaving speeds up the deterioration of barrier functionality.

[\* Cornified Envelope (CE) maturity: an index of barrier functionality at the outermost layer of the horny cell. Horny cells typically mature during the stage of rising from inside to the surface of the skin. When the barrier functionality is in a state of decline, however, many immature CE appear on the surface of the skin. Shiseido has established a method to visually evaluate CE maturity.

## Improving Men's Skin through Fragrance

Shiseido has been promoting many kinds of research over the years into the relationships between the human body's nervous, endocrine, immune systems and skin, or in other words, the connection between the "mind and skin." One area of research is studying the effects of aromas on skin (aromacology research). Up until now, past experimental tests targeting women have elucidated that aromas with sedative effects alleviate stress and promote recovery of the skin's barrier function.

Shiseido recently conducted more in-depth experimental tests on males and confirmed that aromas with sedative effects are also effective on males in reducing stress and promoting recovery of the skin's barrier function. (Experimental tests were conducted in March 2003 and targeted 90 Japanese males.) These experimental tests, which targeted busy businessmen, measured their stress levels before and after being subjected to an environment in which they continuously smelled a fragrance with sedative effects over a period of 28 days. Results of the experimental tests revealed that stress indicators, including self-monitoring of stress levels, measurement of subconscious stress induced by filling out a questionnaire and checking of cortisol levels in saliva, were markedly reduced in comparison with another test group of

businessmen who did not smell the fragrance. These experimental tests also examined the effects on the skin under such conditions by measuring the level of CE maturity as an indicator. In this case, results indicated that due to the promotion of CE maturity, a tendency toward the recovery of barrier functionality was more pronounced among businessmen in the test group who continuously smelt the fragrance.

## **Application to Men's Skincare Products**

Based on the aforementioned discovery of the unique physiology of male skin, Shiseido is developing prestige men's skincare products that combine skincare functionality, which has direct effects on skin such as moisture retention, with skincare benefits using fragrance ingredients with stress-reducing effects, for men whose skin is more susceptible to rough and dry skin due to a decline in barrier functionality.