



The irritant potential determined to the surfactants used in cosmetics

The irritant potential was determined for solutions of selected anionic surfactants with a concentration of 1% active substance using the Zein test. The Zein test provides a quick and convenient test of irritant potential, especially for compositions containing surfactants.

Methodology

The protein (zein) which is unsoluble in water was immersed in the surfactant solution and afterwards the solution was separated from the protein. Subsequently the Kjeldahl method was used to determine the nitrogen content. Based on the outcomes the irritant potential was estimated. The more protein is solubilized by the surfactant solution, the higher the irritant potential.

The zein number was measured for the following selected surfactants used in cosmetic products.

- **SULFOROKAnol L270/1** (Sodium Laureth Sulfate)
- **SULFOROKAnol IT370** (Sodium Trideceth Sulfate)
- **SULFOROKAnol L370** (Sodium C12-15 Pareth Sulfate)
- **SULFOROKAnol L290/1M** (MIPA Laureth Sulfate, Propylene Glycol)
- **SULFOROKAnol L385/1T** (TIPA Laureth Sulfate, Propylene Glycol)

The irritant potential for surfactant solutions with a concentration of 1% active substance

