

JOINT EVENT

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**A study on the hair care formulations containing various amounts of ceramide as anti-aging cosmetics**

Sinae Eom, Hye Jin Hyun and Han Young Kim  
Aekyung Co. Ltd., Republic of South Korea

Ceramides are well known as a potential key player in signal transduction and cell regulation, during keratinization of human hair. However, ceramides are very unstable due to inclination towards crystalization (including gelling or precipitation) so that they are hardly applicable to cosmetics. Especially, the more content of ceramides the products contain, the less stabilization and sensory preference can be assured. In this study, we applied various amounts of stearyl ceramides, developed by Aekyung Central Research Laboratories, on hair care formulations, including shampoo, rinse/treatment, and leave-in type hair essence. Nonionic surfactants, fatty alcohols, and a sort of emollients were effective to improve solubility of ceramides in formulation as well as sensory feeling. Plus, we investigated the effect of hair care products containing high-content ceramides through hair fiber tensile test, combing force test, and hair breakage test with bleached hair tresses. As a result, it was demonstrated that ceramides were effective to improve the strength of single hair fiber, consequentially to decrease the number of broken hair fiber of the bleached hair tresses after repetitive combing. It was also proved that ceramides effectively decreased the combing force on the bleached hair tresses. These results implies that the application of the formulas containing ceramides would be helpful to care damaged hair from outside to inside.

**Biography**

Sinae Eom is currently working for Aekyung Co. Ltd., the one of the leading company in the cosmetics and consumer good industry in South Korea. Eom received the BE and ME degree in bio-medical engineering from the Yonsei University, South Korea. She studied biomechanics and computer aided bio-medical engineering, particularly medical image processing. She has great passion in improving health and beauty industry and has applied her experiences to hair care cosmetics evaluation. She endeavors to develop quantitative evaluation model for hair based on biomechanics and digital image processing. Her current research interests include programming evaluation software and developing formulation for healthier and more illuminating hair.

eomsinae@aekyung.kr

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