Evaluation of Measurement Methodologies for Wrinkles on the Face  Part I
—Validation of various methods for the measurement of wrinkles using a standard scale—

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Abstract
It is well known that wrinkling on the face is a key appearance of skin aging. Prevention and improvement of wrinkles are desired by cosmetic treatments. Various types of methodologies to measure wrinkles have been reported, but there are no reports which reviewed and weighed those methods in an even-handed fashion. In order to develop a guideline for evaluation of facial wrinkles, we conducted validation trials to compare a number of methods. We quantified the depth of wrinkles with selected 2 D-and 3 D-methods by using replicas of a standard scale with known depth of grooves that simulated wrinkles. Although absolute values of measured depth with these methods slightly varied, high correlation was observed between the measured depth values and the known depth values of the standard scale. Results showed this validation method is appropriate to relatively compare and validate methods to measure depth of wrinkles.

Key words: wrinkles, evaluating method, validation, standard scale, depth.

1. 結 言

シワは老化に伴い皮膚に発現する最も特徴的な変化であり、その予防や改善が可能な抗シワ化粧品の出現が古くから強く求められていた。近年の目覚しい技術の進歩によって、シワの改善あるいは予防効果をもつ化粧品の開発が可能になりつつある。欧米では条件付ではあるが、化粧品の抗シワ効果の標榜が可能にされ、日本においてもシワの改善や予防に係る効能効果を化粧品あるいは医薬製品外品で標榜することは薬事法で認められていない。これはシワを客観的に評価する方法についての検討が十分になされていないこと