

〈速報〉

高速液体クロマトグラフィーによる化粧品中の 水溶性アスコルビン酸誘導体の同時分析

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Simultaneous Determination of Water-Soluble L-Ascorbic Acid Derivatives in Cosmetic Lotions by High Performance Liquid Chromatography

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Abstract

A method was developed for the determination of water-soluble L-ascorbic acid derivatives, magnesium L-ascorbyl 2-sulfate (A), disodium L-ascorbyl 2-sulfate (D), L-ascorbyl 6-propionate (C) and 3-O-isopropyl L-ascorbic acid (B), by high performance liquid chromatography (HPLC). Simultaneous quantitation of these four compounds in cosmetic lotion was achieved by reversed phase (ODS silica gel) HPLC with an eluent composed of 2.5 mM KH_2PO_4 :5 mM tetrabutyl ammonium hydrogen sulfate and acetonitrile (92 : 8, pH 2.5), monitoring the column eluate at 254 nm. Under these conditions the recoveries of compounds A, B, C and D were 99.1, 96.0 – 99.7, 100.3 – 103.7 and 97.4 – 99.2, respectively, and coefficients of variation were below 4.2%.

Key words: L-ascorbic acid derivative, high performance liquid chromatography