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# 化粧品中のN-ニトロソジエタノールアミン (NDEIA)に関する研究(II)

—TEA(Thermal Energy Analyzer)—ガスクロマト  
クロマトグラフィーによるNDEIAの定量法—

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## Studies on the N-nitrosodiethanolamine in Cosmetics (II) — Determination of NDEIA by TEA (Thermal Energy Analyzer) — Gas Chromatography

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### Abstract

Methods for analysis of N-nitrosodiethanolamine (NDEIA) in cosmetics were studied by Gas Chromatography (GC) using Thermal Energy Analyzer (TEA).

(A) Pretreatment of cosmetic sample carried out as follows:

- 1) Solvent extraction method; Cosmetic sample was extracted with Acetonitrile.
- 2) Chromatographic separation was carried out on a column of silicagel. (Method I)
- 3) Chromatographic separation was carried out on a column of strongly anion exchange resine. (Method II)

(B) Condition of TEA-GC were as follows:

GC: Column, Silicon OV-17 on Chromosorb W AW DMCS (60-80 mesh) (id, 3 mm × 2 m glass column), Column Temp. 215°C, Inj. Temp. 230°C, Carrier gas, N<sub>2</sub>.

TEA: Range ×4, Furnace 400°C, Cold trap (Liq. N<sub>2</sub> + CH<sub>2</sub>Cl<sub>2</sub>). The detection limit was about 30 ppb. The recovery of NDEIA added sample was over 87% in all cases.

**Keyword:** N-nitrosodiethanolamine, Thermal Energy Analyzer Gas Chromatography, Cosmetics.