

Nitrosamine Analysis

The Cosmetic Regulation EC 1223/2009 specifies in annexes II and III that nitrosamines must not be present in cosmetic products.



Background

Analysis of cosmetic and personal care products for nitrosamine content should be included in Product Safety Assessments to ensure compliance with the Cosmetic Regulation EC 1223/2009.

Formation of relevant nitrosamines can occur by the reaction of secondary amino compounds with nitrosating agents under certain conditions during either manufacture or product storage. In cosmetics, traces of nitrosamines may result through the use of certain cosmetic ingredients and/or through the nitrosation of the precursors present in finished cosmetic products.

The NML at LGC has considerable experience and knowledge of nitrosamine analysis for Apparent Total Nitrosamine Content (ATNC) and N-Nitrosodiethanolamine (NDELA) in both finished products and raw materials. In line with the regulations, we can detect nitrosamines to a detection limit of <math><50\mu\text{g}/\text{kg}</math>.

Sample matrices

We have considerable experience and expertise in testing a wide range of raw materials and finished products. Some examples include:

- Hair dyes
- Shampoos and conditioners
- Self-tanning lotions
- Cosmetics (including concealers)

Analytical capability

- Thermal Energy Analyser (TEA) for ATNC Analysis
- HPLC with Post Column Derivatisation (NDELA)
- LC-MS/MS

Turnaround times

The NML at LGC understands the time pressures within the cosmetic industry and can offer sample turnaround times to meet your specific requirements and projects.

Quality and accreditation

Experience, expertise and quality of results are the main concerns for customers when choosing a laboratory for nitrosamine testing. The NML at LGC prioritises quality with an implemented quality assurance system and validated methods. Our laboratory in Teddington was one of the first to achieve ISO/IEC 17025 accreditation and is one of the only facilities worldwide to hold this accreditation for ATNC and NDELA determination in cosmetic products and raw materials.

For further details on the full range of services please contact us on:
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