



Microanalytics

Contract Analytical Services - Case Study

Case Study #10 **Odors in Personal Bedding Materials**

Internal Reference: Project Code Number K02234

Industry: Mattress and Upholstery

Commodity: Polyurethane Foam Products

Problem/Goal: Consumer complaints about the odor of mattresses.

Analytical Approach: SPME headspace collection of volatile odor compounds followed by analysis on the AromaTrax MDGC-O-MS system to identify and rank the importance of the offending odor compounds.

Findings: All significant odors were identified and ranked as to their importance in numerous polyurethane foam samples. In the most offensive samples, a single intense odorant was found at extreme trace levels. This compound was positively identified.

Resolution: The most important odors were related back to raw materials for polyurethane production. Based on this work, elimination of the most intense odorants from raw materials was achieved.

Comments: This initial work led to an on-going analysis of polyurethane foam products and raw materials from many of the leading producers here and abroad. This area is a prime candidate for the implication of our QC-Trax methodology and we are developing an instrument specific for the analysis.

Links for More Information

Aroma and malodor contract services: www.off-odor.com
Analytical instrumentation for aroma/malodor analysis: www.mdgc.com
QC-Trax Instrumentation: www.odorquality.com



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