

VOLATILE ANALYSIS

Contract Analytical Services - Case Study

Case Study #13 Soft Drink Off-Flavor

Internal Reference: Project Code Number H99237

Industry: Beverage

Commodity: Soft Drink

Problem/Goal: A major soft drink product was found to have an off-flavor at times. A lot of effort was made by the company to try to identify the off-flavor compound.

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: The off-flavor was found to be due to a set of acids and sulfur compounds found in the problematic samples but not in the controls. The fact that so many compounds were involved in the problem complicated the original work done by the company. Even though they identified several of the compounds, none of them alone seemed to cause the overall flavor problem.

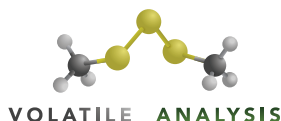
Resolution: The set of bad flavor compounds was indicative of a problem with one of the ingredients. It was confirmed that the flavor variability of the ingredient was the source of the problem. The company went back to the ingredient supplier and worked with them to improve their QC.

Comments: This is an example of the need for QC methodology based on our findings. Ingredient suppliers to the large volume food producers are prime targets for our flavor quality control technology.

Links for More Information

Aroma and malodor contract services: www.volatileanalysis.com
Analytical instrumentation for aroma/malodor analysis: www.mdgc.com

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