



# Microanalytics

## Contract Analytical Services - Case Study

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### Case Study #5 *Malodor / Malflavor in Bottled Drinking Water*

**Internal Reference:** Project Code Number K02229

**Industry:** Beverage

**Commodity:** Bottled Drinking Water

**Problem / Goal:** 'Musty' malodor / malflavor in production lot of 1 pint PET packaged bottled drinking water.

**Analytical Approach:** AromaTrax™ MDGC-MS-O system utilized to isolate the 'character defining' malodorant. This information was then used to screen the production process and packaging materials to determine the source of the flavor defect introduction.

**Findings:** This odor / flavor quality defect was found to be carried by a single malodorant of extreme odor potency. Based on this finding subsequent targeted analysis of various isolated product, process, packaging and material handling elements showed the source of the odorant to be cross-contamination from materials handling supplies and storage facilities.

**Resolution:** These results were used to screen a number of production lots for the odor / flavor quality defect and thereby continue product shipments while removing and destroying the defective lots. This effort enabled the flavor defective production lots to be isolated, the contaminated materials handling supplies and facilities decontaminated and normal production to be resumed.

**Comments:** The power of the AromaTrax system to resolve difficult odor / flavor problems was demonstrated through this study. A high potency 'character defining' odorant was located and isolated very quickly; resolving a long standing problem for which other approaches had failed to produce any significant findings over several weeks of investigation.

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### Links for More Information

Aroma and malodor contract services: [www.off-odor.com](http://www.off-odor.com)  
Analytical Instrumentation for Aroma Analysis: [www.mdgc.com](http://www.mdgc.com)



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