



# Microanalytics

## Contract Analytical Services - Case Study

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### Case Study #1 *Malodor / Malflavor in Bottled Drinking Water*

**Internal Reference:** Project Code Number A03225 (A= Jan 03=year 225= project)

**Industry:** Beverage

**Commodity:** Bottled Drinking Water

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

**Analytical Approach:** AromaTrax™ MDGC-MS-O system utilized to isolate and identify the 'character defining' malodorant. This information was then used to look back in the packaging process to determine where and how the malodorant was being introduced.

**Findings:** A residual, non-odorous volatile precursor compound from a packaging component was being introduced into the filled and sealed product headspace. This precursor was being converted to the primary malodorant through oxidation during the pasteurization process.

**Resolution:** Reformulation of one of the packaging components had led to the introduction of the critical precursor into the container headspace. Supplier of the source packaging component reassessed the reformulation strategy for this application and the problem was resolved.

**Comments:** This was an extremely convoluted malodorant introduction pathway but AromaTrax™ technology enabled quick resolution of this crisis driven quality defect.

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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/odor analysis: [www.mdgc.com](http://www.mdgc.com)



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