

A vertical strip on the left side of the page shows various pieces of laboratory equipment, including gas chromatography components like columns, valves, and detectors, connected by tubes and wires.

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Contract Analytical Services - Case Study

Case Study #4 *Malodor / Malflavor in Plastic Bags*

Internal Reference: Project Code Number A03228

Industry: Packaging

Commodity: Plastic Fast Food Carry-out Bags

Problem / Goal: 'Musty', 'woody' malodor in current production samples of printed polyolefin based carry-out bags sold to international chain fast-food restaurants. The goal of this project was to isolate and identify the malodorant responsible and determine its introduction pathway into the finished product.

Analytical Approach: AromaTrax™ MDGC-MS-O system utilized to isolate the 'character defining' malodorant and track it back to its production or raw material source.

Findings: This odor / flavor quality defect was found to be carried by one malodorant which carried an extreme odor potency (i.e. published human odor threshold 30 parts per quadrillion). This odorant were characterized by an odor character which was virtually identical to that of the composite malodor of the sample itself. Armed with these findings it subsequent analytical efforts confirmed that the malodorant was common to only one resin from a specific foreign subcontractor.

Resolution: The client subsequently worked with the subcontractor to correct and remove the resin lots which had been cross-contaminated in a storage vessel.

Comments: The power of the AromaTrax system to resolve difficult odor / flavor problems was pointed up by this study. One 'character defining' odorant was isolated and identified very quickly; resolving an immediate production crisis problem for which other approaches had failed to produce any significant findings over an extended period of time.

Links for More Information

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



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