

Maintaining sample integrity in breathomics workflows with TD–GC–TOF MS

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Introduction

Breath biomarkers offer a promising, non-invasive method for detecting and monitoring various diseases, from respiratory conditions to metabolic disorders. However, the reliability of this approach hinges on the robustness of the workflows and the strict adherence to quality control measures throughout the analytical process.

This poster outlines a breathomics screening workflow using thermal desorption with gas chromatography–time-of-flight mass spectrometry (TD–GC–TOF MS). Key steps, from sample collection to analysis, are supported by stringent quality control measures ensuring sample integrity, traceability, and reproducibility. This approach enhances the precision of volatile organic compound (VOC) identification in breath, paving the way for advancements in clinical diagnostics and personalised medicine.

Analytical workflow for breathomics

