

Characterization of Beverage Products Containing Cannabidiol (CBD) by GC-MS and GCxGC-MS

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Abstract

Cannabis has gained popularity in recent years, and there is a massive drive to develop this market segment into a major export contributor to the South African economy. Looking at the current product landscape, there is a growing interest in "cannabis" based products, from supplements to creams to beers and soft beverages.

This presentation presents a workflow using GC-MS and GCxGC-MS not only to perform targeted analysis to determine the presence and amount of CBD present in a beverage but also to better characterize these beverages through the use of non-targeted analysis.

Non-targeted analysis requires using a more powerful instrument via the use of GCxGC-MS, which exponentially increases the amount of information available to the laboratory. In turn, this increased complexity lends itself perfectly to using more advanced software tools borrowed from the metabolomics field to simplify data processing and improve the quality of the results.

This dual approach enables the laboratory to better characterize specific flavours in the market while at the same time focussing on specific analytes of interest such as CDB/THC, terpenes, esters, etc.