



Analysis of cannabinoids and terpenes in cannabis products

Background

Legally compliant, sustainable marketing of hemp products requires the control and monitoring of substances that are relevant in legal terms, particularly including Δ^9 -tetrahydrocannabinol (Δ^9 -THC) and Δ^9 -tetrahydrocannabinolic acid (Δ^9 -THCA). Commission Regulation (EU) 2023/915 specifies maximum levels for THC in foodstuffs, while the requirements of the European Pharmacopoeia apply to medicinal cannabis. Terpenes are a class of substances that is attracting growing interest when it comes to the active profile of cannabis preparations. They are therefore gaining importance with respect to the profiling and quality assurance of both medicinal and consumer cannabis.

New statutory regulations

Cannabis flowers, cannabis products and other parts of the cannabis plant ceased to be subject to the requirements of the German Narcotics Act (BtMG) when the Cannabis Act (CanG) came into force on 1 April, 2024. Since this change in legislation, commerce has been regulated by the Consumer Cannabis Act (KCanG), or the Medicinal Cannabis Act (MedCanG) in the case of medicinal products, according to the intended use. The quality requirements of the European Pharmacopoeia monograph "Cannabis flowers" (Ph. Eur. 07/2024:3028) will apply to medicinal cannabis from 1 July, 2024 onwards. The Consumer Cannabis Act stipulates a maximum limit of 10% total THC in consumer cannabis from cultivation associations, which only applies to the 18 to 21 age group.

Analytical quality assurance

PhytoLab has developed a highly sensitive LC-MS/MS procedure for determination of Δ^8/Δ^9 -THC, Δ^8/Δ^9 -THCA and CBD/CBDA/CBN, in addition to the HPLC-UV procedure prescribed by Ph. Eur., and has validated it for a broad range of cannabis products.

Terpenes

While legal requirements already exist for the levels of psychoactive cannabinoids Δ^8 -THC/ Δ^9 -THC and Δ^8 -/ Δ^9 -THCA, as well as cannabinol (CBN) and cannabidiol/acid (CBD/CBDA) in medicinal cannabis, this is not yet the case for terpenes. However, these are becoming increasingly

important in shaping the active profile of cannabis products, as they contribute towards the so-called "entourage effect", whereby specific combinations of cannabinoids and terpenes have unique active profiles. The overall profile of cannabinoids and terpenes is significantly influenced by variety selection, cultivation, drying and further processing.

PhytoLab uses its specifically developed, validated procedure to determine the terpene profile of your cannabis products, both qualitatively and quantitatively.

We would be delighted to draw up a customised offer for you.

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