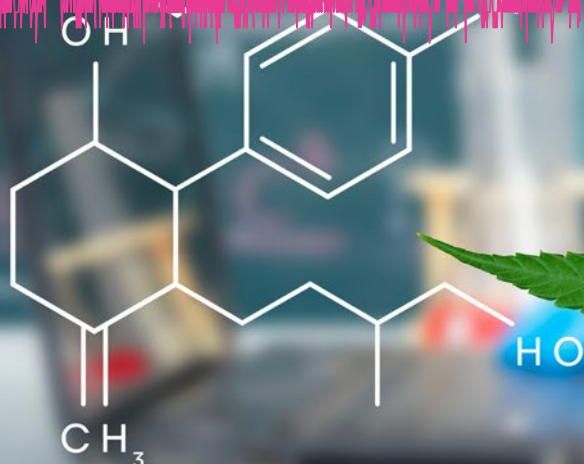


## FACTSHEET



## Analysis of cannabinoids

### Introduction

In recent years, the legalization of cannabis has been pursued by more and more countries. This fascinating plant contains over 500 different substances, including more than 100 cannabinoids, some of which show psychoactive effects. The key psychoactive compound is  $\Delta^9$ -tetrahydrocannabinol (THC), for which strict legal limits are imposed due to its pharmacological and toxicological properties. Another significant but non-psychoactive component is cannabidiol (CBD), which was classified as safe and not addictive by the World Health Organization (WHO) in 2017. CBD is often used in the treatment of insomnia and various chronic pains.

With the growing interest in cannabis and the associated diverse legal requirements, reliable analysis methods are becoming increasingly important to determine the efficacy and cannabinoid profiles and thus ensure transparency, homogeneity, and quality during production.

### Cannabinoid Analysis at Interlabor Belp AG

Whether you want to analyse plants, extracts, oils, CBD isolates, capsules, or numerous other preparations for cannabinoids – Interlabor Belp AG is the right partner for you!

Our in-house method for analyzing cannabinoids has been expanded and now enables the detection of up to 14 cannabinoids in total. A unique feature of the enhanced method is its ability to

precisely analyze the major impurity of cannabidiol (CBD), namely cannabigerol (CBG). This provides a crucial advantage compared to conventional publicly available methods.

We offer the analysis of up to 14 different cannabinoids in a variety of matrices. The cannabinoids currently available for analysis are listed in the following [Table 1](#). A chromatogram is shown in [Figure 1](#).

**Table 1: Overview of Cannabinoids**

Cannabinoid	Abbreviation	CAS-Number
Cannabichromene	CBC	20675-51-8
Cannabichromenic acid	CBCA	185505-15-1
Cannabidiol	CBD	13956-29-1
Cannabidiol acid	CBDA	1244-58-2
Cannabidivarin	CBDV	24274-48-4
Cannabidivarinic acid	CBDVA	31932-13-5
Cannabigerol	CBG	25654-31-3
Cannabigerolic acid	CBGA	25555-57-1
Cannabinol	CBN	521-35-7
Tetrahydrocannabidivarin	THCV	31262-37-0
Tetrahydrocannabivarinic acid	THCVA	39986-26-0
Tetrahydrocannabinolic acid	THCA	23978-85-0
$\Delta^8$ -Tetrahydrocannabinol	$\Delta^8$ -THC	5957-75-5
$\Delta^9$ -Tetrahydrocannabinol	$\Delta^9$ -THC	1972-08-3

Our analysis method is based on a chromatographic separation using liquid chromatography, supplemented by precise UV detection. The characteristic chromatogram containing the 14 cannabinoid compounds currently included is shown in Figure 1. With a sensitivity of up to 0.01 % (matrix-dependent, generally covered up to 0.1 %), our method provides a reliable precision in cannabinoid detection. This ensures compliance with the current legal requirements for THC content in various countries such as Switzerland (THC content < 1 %) and Germany (THC content < 0.2 %). The current analytical quality meets state-of-the-art standards. Compliance with ISO and GMP standards can be assured after a successful matrix- or product-specific validation.

Our new method allows a versatile analysis, covering not only finished products but also raw materials, intermediates, pharmaceuticals, and cosmetics. Additionally, it offers an outstanding precision

and a great potential to meet your analytical requirements. We will be happy to provide further consultation and support as needed.

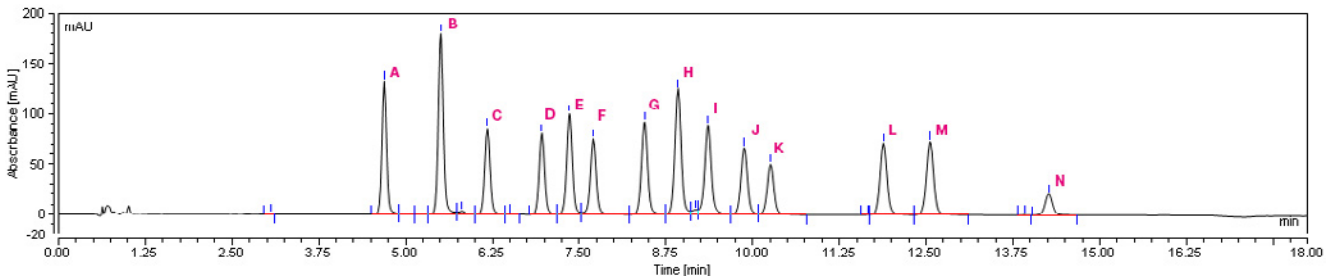
### Key data for cannabinoid analysis at Interlabor Belp AG

Interlabor, as an independent laboratory, offers cannabinoid analysis for various products.

- Analysis quality: State of the art (ISO and GMP after successful validation)
- Sample amount: approx. 20 g of a representative sample
- Delivery time: approx. 15 working days (standard delivery)
- Analysis price: from CHF 290.- per sample

For further information or to arrange an analysis, we are at your disposal.

Figure 1: Chromatogram of the Interlabor new analysis methods



Retention time (in minutes)

<b>A</b> 4.687 CBDV	<b>B</b> 5.502 CBDVA	<b>C</b> 6.172 THCV	<b>D</b> 6.956 CBD	<b>E</b> 7.357 CBDA	<b>F</b> 7.697 CBG	<b>G</b> 8.435 THCVA
<b>H</b> 8.914 CBN	<b>I</b> 9.347 CBGA	<b>J</b> 9.863 Δ <sup>9</sup> -THC	<b>K</b> 10.247 Δ <sup>8</sup> -THC	<b>L</b> 11.872 CBC	<b>M</b> 12.547 THCA	<b>N</b> 14.252 CBCA

# INTERLABOR BELP AG



**Interlabor Belp AG**  
 Aemmenmattstrasse 16  
 3123 Belp, Switzerland  
 Phone +41 (0)31 818 77 77  
 www.interlabor.ch  
 info@interlabor.ch

**Opening hours:**  
 Monday to Friday  
 08:00 a.m. – 12:00 p.m.  
 01:30 p.m. – 05:00 p.m.

 Follow us!  
*Analytics with passion*