

THE CBD FROM BRAZILIAN BIODIVERSITY

The safe, effective & complete COPAIBA OIL: an Amazon Rainforest CBD

Motivation

Copaiba balm is a very complex mixture of active substances that trees secrete through the bark. Resin oil, also known as copaiba balm, is the *Copaifera* resin.

It is naturally composed of a solid and non-volatile resinous part, formed by diterpenic acids. In its most volatile part, responsible for the aromatic properties, is an essential oil composed of sesquiterpenes, which together add up to more than 60 compounds present in the composition of this potent product.

Copaiba balm was already used by natives of the Amazon in folk remedies long before they were known in the 21st century for relieving pain, stress or serving as an antimicrobial solution.

Copaiba oil is obtained by steam distillation of copaiba balm whose cultivation is completely sustainable.

Copaiba oil Composition Chromatographic Analysis

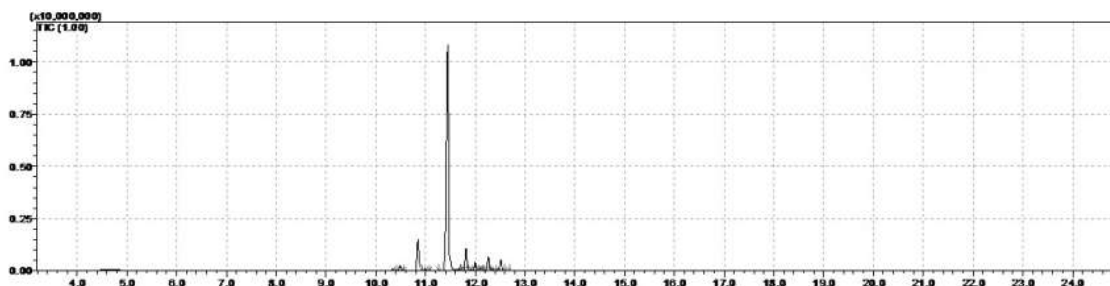


Figure 1. Chromatogram of total ion

The Copaiba oil is a light compound, free of the crude resin, popularly known because of its therapeutic expectorant and aphrodisiac action. Due to its intense composition, with bioactive compounds and very used in industrial proposes for healing and anti-inflammatory activity.

Table 1. Volatile constituents identified by GC/MS (Shimadzu QP-Plus 2010)

RT	CONSTITUENTS	%
10.342	δ -Elemene	0.53
10.483	α -Cubebene	1.22
10.850	Copaene	8.98
10.983	Germacrene A	0.79
11.217	α -Gurjunene	0.16
11.450	(E)-Caryophyllene	70.35
11.642	Aromandendrene	0.29
11.817	α -Humulene	5.75
11.900	Alloaromadendrene	0.49
11.992	Germacrene D	2.09
12.058	trans- β -Bergamotene	0.41
12.108	γ -Amorphene	1.17
12.158	E,E)- α - Farnesene	0.21
12.258	β -Bisabolene	3.72
12.350	RT:12.350	0.58
12.458	γ -cadinene	0.59
12.517	δ -cadinene	2.52
12.633	E) - α - Bisabolene	0.15

Besides the most known compound β -caryophyllene, some other substances can be found in the natural composition of the essential oil. Together, they represent more than 95% biologically active compounds, showing the high potential of action of this ingredient.

Some examples of additional functionalities of Copaiba oil due to the synergy between all its components:

- **Copaene**

Antioxidant, Neuroprotective Activity

- **α -Humulene**

Marked anti-inflammatory properties of airways allergic inflammation, an effect that seemed to be mediated via reduction of inflammatory mediators, adhesion molecule expression and transcription factors activation

- **β -Bisabolene**

Some literatures support that its presence in the composition of an essential oil can improve the anti-inflammatory and antimicrobial activity, being able to act against gram positive and negative microorganism, such as *S. aureus*, *E. coli* and *K. pneumonia*. Besides that, the compound exhibits antioxidant effect.

- **Germacrene D**

Some reports related that essential oils rich in germacrene-D exhibit properties as alleviates stress and anxiety. Aromatherapy that involves germacrene can boost mood and can even help some individuals experience feelings of euphoria or happiness (empirically linked). Studies also report the use of germacrene-D as insect repellent.

- **γ-Cadinene**

It was reported that cadinene-containing essential oils can produce induction of hepatic P450s enzymes and therefore increase drug metabolism.

Copaiba oil as a source of Cannabinoid

The raising use of cannabinoids are closely linked with the therapeutical activities besides the anti-inflammatory property. The most highlighted cannabinoids are cannabidiol (CBD), tetrahydrocannabinol (THC), and β-caryophyllene (BCP). These compounds are present in different vegetable sources such as cannabis plant and copaiba oil. However, Copaiba is one of the most interesting natural ingredients to explore the experience delivered by this kind of product.

- **CBD from Cannabis oil**

Regarding the effectiveness Even in the pure form the cannabinoid from cannabis (cannabidiol - CBD) can have trace amounts of THC, which has psychoactive activity on brain.

Also, the CBD is an isolate molecule (extracted) that must be blended with other compounds (such as a vegetable carrier oil). In this way, the activity on CB Receptors is indirect and until now, there is limited science for this compound.

Since the pathway of CBD is quite unknown, the regulatory compliance is a big challenge for many countries and some of them neither allow studies, analysis or trials.

- **BCP from Copaiba oil**

Even with lower costs, copaiba oil has a higher effectiveness either by its complete composition (not a single compound as CBD) or the years of studies and popular use. It has been used for hundreds of years throughout South America for physical and spiritual healing and is very common to find in most markets. Also, Copaiba oil safe use with remarkable results.

In addition to its antimicrobial action, BCP provides neuroprotective activity of selective activation of cannabinoid-type-2 (CB2) receptors, decreasing inflammation process. Unlike the CBD, the Copaiba oil has direct activity on CB receptors and more the 1,000 published studies that reveal the activity of its constituents and their interaction and influence on human body.

The Copaiba oil, with more than 70% of BCP, is worldwide accept and legal, besides is 100% pure and active.



Conclusion

The Copaiba oil can be used topically to clear the skin and reduce blemishes, and when ingested can have positive effects on your internal health as well, like expectorant, gastric, hepatic and renal activity and healing.

Besides the BCP, the major compound, Copaiba oil is a natural source of anti-inflammatory substances and the synergy between all its components. allows several other applications, with a robust support. It is completely safe, worldwide approved, with no restrictions or side effects, free from psychoactive (which can cause a “high” response).