# Is Your CBD Safe?

# CannaSafe

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www.CSALabs.com

## Why is CBD Safety Testing so Important?

CBD, a popular non-psychoactive cannabinoid showing great therapeutic promise, can be sourced in one of two ways—from the hemp plant (*Cannabis Sativa*) or from the marijuana plant (*Cannabis Indica*), a subspecies of *Cannabis Sativa*. CBD derived from marijuana is regulated by the State just as other THC-containing cannabis products, however, CBD derived from hemp is not regulated, and is only federally required to be tested for potency, making sure it contains no more than 0.3% THC.

Due to this serious lack of regulation, many CBD products currently on the market are mislabeled (some may not even contain CBD at all!), while others may contain dangerous contaminants such as residual solvents and heavy metals.



In order for CBD to be determined safe, it should be thoroughly tested by an ISO accredited third-party laboratory for both accuracy and safety.

Part of this testing confirms label claims, ensuring that what a brand says is in the product is actually in that product. Typically, this would confirm the presence and amount of CBD, for example.

> Next, and most importantly, safety testing is used to identify the presence of a number of harmful contaminants, including pesticides (like myclobutanil which turns into hydrogen cyanide when ignited), residual solvents (like butane), pathogens (like E.coli), heavy metals (like lead), and mycotoxins (like Aflatoxin).

> Each of these present varying dangers to human health, and when inhaled, consumed, or even applied topically, they can lead to serious problems.

> > The good news? These dangers are easy to avoid. Buy from brands who do strict thirdparty testing.

> > > Shop at a licensed dispensary, check product COAs (see page 7), and consume confidently.

Stay Safe!

# How do Dangerous Contaminants

Make Their Way into Products?

#### **Pesticides:**

There are diverse cannabis and hemp cultivation methods, including outdoor, greenhouse, and indoor, each utilizing different pesticides depending on their growing environments. There are two types of pesticides—systemic and non-systemic. Non-systemic pesticides are topical pesticides that can be easily washed off of a plant before use, whereas systemic pesticides are actually absorbed by a plant when applied to seeds, soil, or leaves. Many pesticides pose great harm to human health. For this reason, flower and final products must be screened for any dangerous pesticides prior to consumption.

#### **Residual Solvents:**

Cannabis, hemp, and CBD products undergo a variety of processing techniques before they make it onto dispensary shelves. While some manufacturers use "solvent-free" techniques that don't introduce any potential adulterants into products, many manufacturers use different types of solvents like butane, isopropyl alcohol, propane, or ethanol, depending on their extraction needs. When consumed or inhaled by humans, these solvents can cause harm to the body and lungs. Thus, products must be tested to ensure that any solvents used in manufacturing and production have been properly removed.

#### **Heavy Metals:**

Inhalation or ingestion of heavy metals can cause severe illness, including neurotoxicity, in humans. By nature, the cannabis and hemp plant will accumulate metals and other elements from the air, soil, water, pesticides, and fertilizers in their cultivation environment—both outdoors and indoors. Heavy metals can also be introduced during the manufacturing process and can hide in surprising places such as in hardware or final packaging, leaching into the product over time. For this reason, its important to complete stability testing (shelf-life studies) to determine how a product changes over time and under certain storage conditions.

#### **Mycotoxins:**

Mycotoxins are naturally occurring toxins in molds and fungi. They can be found on many food crops like grains, nuts, fruit, and cannabis and hemp crops—especially under warm and humid conditions which are conducive to microbial growth. Ingestion or inhalation of mycotoxins by humans can cause great harm including nausea, vomiting, or death.

#### **Foreign Matter:**

Hair, mold, insects, cinders, sand, dirt, soil, and even Mammalia excreta (fecal matter) can make their way into products during cultivation, curing, manufacturing, storage, and transporting—despite best efforts to avoid them. Often, improper product handling or facility cleanliness issues in production stages are the cause. It's important to screen for any foreign matter contaminants to ensure safety.

#### **Moisture/Water Activity:**

All plants are made up of mostly water. Harvested cannabis and hemp must be dried appropriately prior to storage or manufacturing, as too much water will create a breeding ground for microbial growth such as bacteria, yeast, and mold. The drying process must also be consistent across an entire batch for safety and to accurately determine microbial viability (the probability of any growth occurring). Testing for moisture and water activity is an important measure to confirm shelf-life and stability of a product.

#### **Microbial Pathogens:**

Pathogenic bacteria can pose serious health risks to humans, especially to those whose immune systems are compromised. Respiratory problems, gastroenteritis, and diarrhea are among the effects of inhaling or consuming microorganisms. It's imperative to test the final product to ensure it's free from any microorganisms that may have been introduced during cultivation, transportation, manufacturing, storage—or even spread by whiteflies, as in the case of Aspergillus.

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# How do Brands Prove Their Label Claims?

Laboratory tests are the only way to confirm label claims. Potency test results declare the factual amount of cannabinoid content like THC and CBD, while terpene profiling indicates the presence and quantity of terpenes in the product. Terpenes help differentiate strains and have a powerful influence over the effect and experience of the cannabis being consumed. Because of their importance, potency and terpene data are the most commonly made label claims to help consumers choose products that fit their needs.

#### **Potency:**

Potency testing measures the cannabinoids in cannabis and hemp. To confirm that that a plant or product will cause a desired effect or intensity, its potency must be accurately calculated.

#### **Terpene Profiles:**

Testing for terpene profiles helps to identify unique strains, allowing consumers to make more informed decisions about products that work best for their needs.

### How Can I Check if a Product **is Safe?**

Locate the Certificate of Analysis (COA) for the product that confirms it was safety tested by an ISO 17025 accredited laboratory. The COA will allow you to view all testing results. COA's can be found via QR code on product packaging, on the products website, or by asking the lab listed on the product directly.

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Justice OG Jampie ID: 2004/SALA4200.4220 Mortic Plant Sprain: Justice DG Harvested: 01/06/2020 Collected: 04/20/2020 Received: 04/2020 Received: 04/2020 Received: 04/2020 Received: 04/2020 Received: 04/2020 Received: 04				tice OG 01/06/2020 04/20/2020 04/20/2020		Distributor	Producer				
sampre size: 21 grams Completed: 04/24/2020 Batch Size: 5440 grams METRC ID: 1A4070500004D0000					0001967	Lic. # C11-00022400-LIC	American Greens Lic. # CCL19-0059			441	
Batch#: BB4-J	an-2020		Source IDs	: 1A4070500004D0000	0008756	7027 Hayvenhurst Ave. Van Nuy	is CA 91406	11641 R	oscoe Pl,	North Hills, CA 9	1343
						Summary				Pas	
			Carl Carl			28.56%	- I	Pass		Not Te	ested
					Total Cannabinoids Pass		Pesticides			Residual Solvents Pass	
							Pass				
						Microbials	My	cotoxins		Heavy 1	Metals
Cannal	oinoids				Pass	Terpenes				Co	mplet
Testing me	thod: HPLC-	SOP 101	December	December 1		Testing method: HS-GC	-FID - SOP 2	201	0		
Analyte	mala	ma/a	Results	mg/g		Analyte	16		56 Kesur	ma/a	
THCa	0.002	0.006	28.00	279.99		B-Myrcene	0.00012	0.0013	0.36	3.59	
Δ9-THC	0.0038	0.0115	0.27	2.74		a-Pinene	0.00015	0.0013	0.28	2.84	
CBGa	0.0016	0.005	0.20	1.99		β-Caryophyllene	0.00017	0.0013	0.13	1.28	
CBG	0.0047	0.0143	0.06	0.59		β-Pinene	0.00034	0.0013	0.12	1.24	
CBDa	0.0012	0.0037	0.03	0.34		δ-Limonene	0.00016	0.0013	0.05	0.53	
CBC	0.0009	0.0027	ND	ND		α-Humulene	0.00057	0.0013	0.04	0.43	
CBD	0.0059	0.018	ND	ND		Linalool	0.00015	0.0013	0.04	0.36	
CBDV	0.0042	0.0126	ND	ND		trans-Nerolidol	0.00058	0.0013	0.02	0.23	1 - C
CBN	0.0014	0.0041	ND	ND		α-Bisabolol	0.00015	0.0013	0.01	0.14	1.1
THEV	0.0036	0.0111	ND	ND		Camphene	0.00072	0.0013	ND	ND	
D8-THC	0.0038	0.0115	ND	NU		Caryophytiene Oxide	0.00017	0.0013	ND	ND	
Total	_		28.56	285.65	_	Eucalyptol	0.00017	0.0013	ND	ND	
	24 020	,		0.02%		Guaiol	0.00013	0.0013	ND	ND	
	24.037	0		0.05%		Isopulegol	0.00011	0.0013	ND	ND	
	Total Th	HC		Total CBD		Ocimene	0.00013	0.0013	ND	ND	
	Total II			Total CDD		p-Cymene	0.0001	0.0013	ND	ND	
Date Tested: 0	3/23/2020					Terpinolene	0.00016	0.0013	ND	ND	
Total THC = THCa * 0.877 + d9-THC						a Terpinene	0.00012	0.0013	ND	ND	
Total CBD = CBDa * 0.877 + CBD						y-Terpinene	0.00012	0.0013	ND	ND	
LOQ = Limit o	f Quantitation;	LOD = Limit of	Detection; NT =	Not Tested; ND = Not D	betected.	δ-3-Carene	0.0004	0.0013	ND	ND	
The reported	result is based	on a sample w	eight with the ap	plicable moisture cont	ent for that	Total			1.06	10.65	
sample;						Date Tested: 03/23/2020					
					13.0%	0.6	0.630 aw Pa		c c		
						13.070	0.0	50 aw		Fa	33
					Moisture Moisture Applear 508,102	Water Activity			Foreign Matter		
						Date Tested: 03/23/2020	Date Tes	ted: 03/23/	2020	Date Tested:	03/20/2020
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Accreditation No. 73653					Laboratory Director - LA		Quality Review			COA Review	
					0.44	12412020	04/24/202	0		04/24/2	2020

# How Do I Find an Accredited Testing Laboratory?

Its imperative to find a lab that is ISO 17025 accredited, but that's not all. A majority of labs are only accredited for a few of the tests they perform. You should always check that a lab is accredited for every single compliance test they are performing, and one that stands behind its results.



#### **Questions about Safety?**

#### Call or email CannaSafe at 1 (818) 922-2416 or info@csalabs.com

CannaSafe is the world's first ISO 17025 accredited cannabis testing lab and is fully accredited on all compliance testing methodologies. Built on quality and integrity, CannaSafe has expert teams and processes in place that ensure accurate and dependable testing results.







