

Alleviate X

Sample ID: 1809CSALA0823.2871
Strain: Alleviate X
Matrix: Ingestible
Type: Tincture
Sample Size: 1 units; Batch:

Produced: N/A
Collected: 09/19/2018
Received: 09/19/2018
Completed: 09/20/2018
Batch#: 00421-02

Client
101 Hemp
Lic. #
3875 TELEGRAPH RD
VENTURA, CA 93003



Summary Pass

511.5000 mg/unit Total Cannabinoids	Pass Pesticides	Not Tested Residual Solvents
Not Tested Microbials	Not Tested SOP-001 Foreign Matter	Not Tested Heavy Metals

Cannabinoids Complete

Testing method: HPLC-SOP 101

Analyte	LOD	LOQ	Mass	Mass
	mg/unit	mg/unit	mg/unit	mg/g
THCa	0.0120	0.0300	ND	ND
Δ9-THC	0.0090	0.0300	2.1000	0.0700
Δ8-THC	0.0150	0.0600	ND	ND
THCV	0.0180	0.0600	ND	ND
CBDa	0.0120	0.0300	258.6000	8.6200
CBD	0.0090	0.0300	180.9000	6.0300
CBDV	0.0210	0.0600	5.7000	0.1900
CBN	0.0060	0.0300	ND	ND
CBGa	0.0180	0.0600	1.8000	0.0600
CBG	0.0180	0.0600	49.5000	1.6500
CBC	0.0060	0.0300	12.9000	0.4300
Total			511.5000	17.0500

2.1000 mg/unit
Total THC

407.6922 mg/unit
Total CBD

1 Unit = 1 fl oz, 30g

Terpenes

Testing method: HSGCMS-SOP 201

Analyte	LOD	LOQ	Mass	Mass
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NT
Moisture
SOP-103

NT
Water Activity
SOP-102

Date Tested: 09/20/2018
Total THC = THCa * 0.877 + d9-THC
Total CBD = CBDa * 0.877 + CBD
LOQ = Limit of Quantitation; LOD = Limit of Detection; NT = Not Tested; ND = Not Detected.
The reported result is based on a sample weight with the applicable moisture content for that sample;



ISO / IEC 17025:2017 ACCREDITED LABORATORY
Accreditation No. 73653



Inibong Afa

Inibong Afa
Executive Lab Director
09/20/2018

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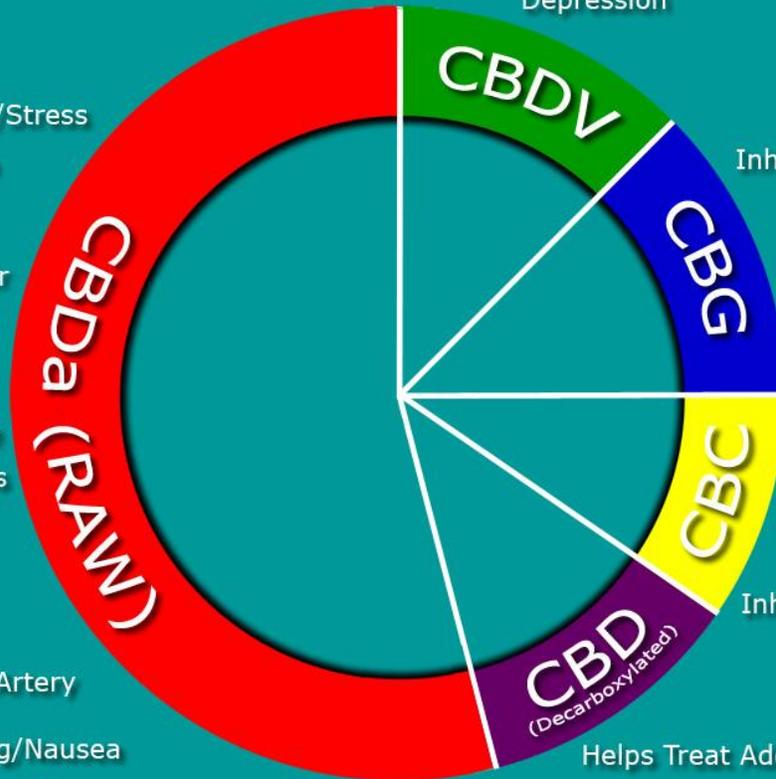




CANNABINOIDS PROFILE

Epilepsy
 Osteoporosis
 ALS / MS
 Insomnia
 Pain & Inflammation
 Arthritis
 Depression

Relieves Pain
 Relieves Anxiety/Stress
 Helps with Sleep
 Most Bio-Available
 Long Term Repair
 Antibacterial
 Inhibits Cancer Cell Growth
 Neuru-protective
 Reduces Seizures and Convulsions
 Reduces Blood Sugar Levels
 Reduces Inflammation
 Reduces Risk of Artery Blockage
 Reduces Vomiting/Nausea
 Suppresses Muscle Spasms
 Tranquilizing
 Chonic Ailments



Aids Sleep
 Inhibits Cancer Cell Growth
 Promotes Bone Growth
 Slows Bacterial Growth
 Promotes Bone Growth
 Reduces Inflammation
 Relieves Pain
 Inhibits Cancer Cell Growth

Helps Treat Addiction
 Periodic Ailments
 Breast Cancer
 Similar to CBDa

www.101CBD.org - (888) 438-9808 - info@101CBD.org

These statements have not been evaluated by the FDA.
 Our products are not intended to diagnose, treat, cure or prevent any disease.

EVERYONE IS TALKING ABOUT CBD – TELL ME MORE ABOUT IT?

WHAT IS CBD?

CBD is a component of the hemp plant that doesn't get you high but has been recognized for its health benefits in humans and animals alike. Our bodies have something called the endocannabinoid system that acts as receptors for the compounds in the cannabis plant. This non-addictive, non-psychoactive, healing compound has been shown to offer the body health benefits such as Pain Relief, Anti-Inflammatory, Antioxidant, Anti-Nausea, Anxiety Relief, Insomnia Relief, Improved Mood, Anti-Seizure, among many others.

CBD has been taking the world by storm. More and more people are learning about this "miracle oil", yet many of us still have unanswered questions or have been misinformed. One of the main misunderstandings of CBD oil is that all CBD is not created equal because of the difference between Full-Spectrum CBD and CBD isolate. If you know the difference between Tang and freshly squeezed orange juice, you're on the right track.

Full-Spectrum oil, like the ones we carry, ensures you are getting the benefit of multiple active plant compounds including CBD. Our oil includes a wide variety of cannabinoids such as CBDA, CBDV, CBG, and CBC as well as valuable terpenes, vitamins, minerals, fatty acids, phytonutrients and other plant materials. Many people refer to Full-Spectrum oils as having an "entourage effect" which means you're getting the benefits of not one, but all cannabinoids working together in harmony along with terpenes present in the plant, something that isolate products lack.

The opposite of Full-Spectrum is CBD isolate. This is simply pure, isolated CBD compound, all by itself. It's a white powder that contains emulsifiers and solvents like corn starch and no other active compounds. It was once believed that a concentrated CBD powder would provide the most benefit considering CBD is the primary active compound however, after more studies were completed in 2015, researchers out of the Hebrew University of Jerusalem's Lautenberg Center for General and Tumor Immunology discovered what's now called the "Entourage Effect." Isolating CBD strips the oil of cannabinoids, terpenes, other components that add to the immediate and long-term healing power of the hemp extraction. Also, in this powder form, the CBD isolate simply rolls off the CB1 and CB2 receptors, so it has been shown that though you might feel the effects of the CBD isolate, it does not engage with your endocannabinoid system like Full-Spectrum CBD.

Even though the health benefits of Full-Spectrum CBD outweigh that of CBD isolate, for some, CBD isolate can be a better option. In Full-Spectrum CBD, there must be a trace amount of THC for it to be considered "Full-Spectrum". For our CBD to be legal, the amount of THC must be less than .03%. If you are taking an average dose of our CBD (typically 20mg per day for an adult) the amount of THC should not result in a failed drug test. In much higher doses, like hundreds of milligrams daily, it is possible that trace levels of THC will be detected. CBD isolate could give it's users piece of mind that their drug test will come out clean.

The difference between Full-Spectrum CBD and CBD isolate is clear but when deciding between the two products, it's important to weigh the differences and base your decision on your independent health goals.

CAN YOU TAKE CBD ON TOP OF OTHER MEDICATIONS?

It has been shown to be safe to take CBD on top of other medications, but we always recommend you discuss taking CBD and modifying current medications with your regular physician. You may not see/feel results of CBD if you are currently medicated. The rule of thumb is if the medication interacts with grapefruit, CBD will slow down the metabolizing of that particular pharmaceutical drug meaning you won't need to take as much.

HOW LONG DOES IT TAKE TO BEGIN TO HAVE THE DESIRED EFFECT?

Depending on how you ingest CBD (from quickest to slowest: vapes, sublingual oils, topicals, edibles) the timing of relief can vary. Most people will feel something within 5-10 minutes but over time, your system will start to incorporate it into your body better. Some people find it takes 2-4 weeks to really feel the full effects. CBD that is not extracted with a heating process is the best way to ensure you have the most impactful results

HOW MUCH CBD SHOULD ONE TAKE?

This depends on your own personal tolerance level, your body and your method of ingestion. Every person's body is different. It's always better to start with a low dosage and work your way up gradually. Once you find the desired relief, maintain that dosage.

IS CBD LEGAL?

Products that are manufactured from agricultural hemp, which contain less than 0.3% THC in dry weight, are exempt from the Federal Controlled Substance Act, and therefore are currently not unlawful for distribution. 101 CBD products fall under this category.

IS IT BEST TAKEN ON AN EMPTY STOMACH?

To feel results quicker, take on an empty stomach. Having food in your stomach, especially if using edibles, oils or capsules, will delay the desired effects.

ANY KNOWN SIDE EFFECTS?

There are no known side effects of taking CBD. If you ingest a large amount of CBD and your body isn't used to it, you may feel somewhat drowsy. An excessive amount of CBD could be less effective therapeutically than a moderate dose. "Less is more" is often the case with respect to cannabis therapy.

One concern many people have about CBD is that its uses are just based on anecdotal stories and personal testimonies. This blog includes citations from recent research to show that there is published, scientific evidence for the benefits that users are reporting. There is still much research to be done, but understanding CBD is based on first understanding its foundation of effectiveness, the endocannabinoid system (ECS system).

This foundation of CBD benefits rests on the many and unique actions of the endocannabinoid system (ECS), a total body system present in virtually every cell type in the body. The main function of the ECS is to provide balance. The ECS is present from earliest embryo development, throughout development, and continues to play an important role in familiar neurodegenerative diseases such as Alzheimer's disease, Parkinson's disease, Huntington's disease, and multiple sclerosis. (Battista, N. DiTommaso, M. Ba, M. Maccarrone, M. 2009)

ECS signals between cells are relayed by two receptor types, CB1 that is abundant in the brain and CB2, which affects peripheral nerves in the body. ECS is active in the parts of the central and peripheral nervous system that respond to stress, where it helps reduce pain and lessen neurodegenerative and inflammatory damage. Short term effects involve plastic changes in many areas of the brain affecting pain sensation. The ECS system also is involved in migraine pain, providing a means to find a solution to this common issue. (Leimuranta, P. Khirou, L. Ceiniatullin, R. 2018)

The ECS system in the brain balances the release of neurotransmitters that excite or inhibit the nerves, and thus is strongly involved in neuropsychiatric disorders, especially affective disorders such as anxiety and depression. (Micale, V. DiMarzo, V. Sulcova, A. Wotjak, CT. Drago, F. 2013)

Although in depth research in the US on CBD has been done mainly in the last 10 years, results from diverse research have shown the ECS regulates multiple processes involving consciousness such as pain, learning, memory, emotions, attention, and the sleep-wake cycle. Current researchers are even hypothesizing the ECS may be moderating dream activity with the hope of reducing nightmares related to PTSD (Murillo-Rodriguez, E. Pastrava- Trejo, JC. Salas-Crisotomo, M. de-laCruz, M. 2017). So, unlike the many herbs, essential oils, and pharmaceuticals we have used to treat health concerns in the past, using CBD to activate the endocannabinoid system is demonstrating a whole new level of methods to provide relief from the common conditions we face.

DIFFERENT USES FOR CBD:

CBD FOR PTSD

You've heard about taking CBD for PTSD, but how does it work? It has been reported that 70% of adults in the United States have gone through some type of traumatic event at one point in their life. It's estimated that 44.7 million people have developed some sort of PTSD (post-traumatic stress disorder) stemming from a traumatic event. Although this is most common in war veterans, it can occur in anyone who has experienced trauma from an event. It usually consists of flashbacks, severe anxiety and intense emotional or physical reactions.

Many people with PTSD suffer from problems sleeping, nightmares, angry outbursts and loss of interest in certain activities. This can be treated with psychotherapy efforts that expose PTSD patients to a similar trauma to make sense of the bad memories and can teach them how to reduce anxiety. Often, antidepressant medications are prescribed to help with feelings of anger or numbness. As always, with medications comes side effects like nausea, drowsiness, and more.

PTSD patients have been able to manage their symptoms with the help of cannabis. The two major cannabinoids, CBD and THC, help the endocannabinoid system by maintaining an overall homeostasis, as well as regulating mood and memory consolidation. These cannabinoids block the retrieval of the traumatic event and reduces the associated anxiety. People with PTSD had a 75% reduction in their symptoms when using cannabis.

There are many disorders that might partially be rooted in endocannabinoid deficiency, PTSD included. Research has shown CBD oil has helped countless patients by improving PTSD symptoms. It also helps by blocking mood receptors that regulate stress hormones, prevent flashbacks, and halt memories that

trigger the trauma. CBD aids in alleviating depression, anxiety, nightmares, irritability, and much more – allowing relief without a psychoactive effect, unlike THC.

If you are considering taking CBD for PTSD, remember that the effectiveness of the CBD oil depends on the quality of the product. Always be aware of what you are purchasing and only buy from reputable sources.

Positive synergies

Other noteworthy findings in the Project CBD primer:

- *THC v. lung cancer.* When cannabis is smoked, cytochrome P450 enzymes in the lungs convert inhaled ash into potent carcinogens, including highly toxic polycyclic aromatic hydrocarbons (PAHs). But THC may protect against lung cancer by inhibiting the same metabolic enzymes that PAHs induce.
- *Cannabinoid-opiate interactions.* Supplementing an opioid-based pain-management regimen with cannabis could result in lower doses of opioids required for adequate analgesia. Lower doses of opioids will reduce the number of overdose deaths. This is an example of a potentially beneficial cannabinoid-drug interaction.
- *CBD, THC & chemotherapy.* Limited preclinical research indicates that administering CBD and/or THC in conjunction with first-line chemotherapy drugs could potentiate the latter, thereby reducing the dosage of highly toxic chemo necessary to treat the cancer. If this translates to human experience, it would be a huge benefit. But if pure CBD delays chemo metabolism, dangerously high levels of a toxic drug could accumulate unless the dose of chemotherapy is reduced and properly managed. The fact that cannabinoids make radiation and chemotherapy both more tolerable and seemingly more effective is an area worth studying.
- *Blood thinners.* Both THC and CBD delay the metabolism of warfarin, a widely prescribed blood thinner. Mis-dosing warfarin causes tens of thousands

of ER visits every year because of excessive bleeding. The Project CBD primer reviews a recent case study as an example of how physicians can successfully adjust the dose of warfarin for a patient who is also taking a CBD isolate.

- **Cannabidiol**—CBD—is a cannabis compound that has significant medical benefits, but does not make people feel “stoned” and can actually counteract the psychoactivity of THC. The fact that **CBD-rich cannabis** is non-psychoactive or less psychoactive than THC-dominant strains makes it an appealing option for patients looking for relief from [inflammation](#), [pain](#), [anxiety](#), [psychosis](#), [seizures](#), spasms, and [other conditions](#) without disconcerting feelings of lethargy or dysphoria.
- Scientific and clinical research—much of it sponsored by the US government—underscores CBD’s potential as a treatment for a wide range of conditions, including [arthritis](#), [diabetes](#), [alcoholism](#), [MS](#), [chronic pain](#), [schizophrenia](#), [PTSD](#), [depression](#), [antibiotic-resistant infections](#), [epilepsy](#), and other neurological disorders. CBD has demonstrable neuroprotective and neurogenic effects, and its [anti-cancer properties](#) are currently being investigated at several academic research centers in the United States and elsewhere. Further evidence suggests that CBD is safe even at [high doses](#).
- Project CBD responds to inquiries from all over the world. Almost everyone wants to know [where to get CBD-rich products](#) and [how to use them](#) for maximum benefit. After decades in which only high-THC cannabis was available in North America and beyond, CBD-rich strains and products are now available to medical users.