

An Introduction to the Active Ingredients of Cannabis

Patients continually comment that they are amazed when they find out some of the best medicine for them is quite often not the medicine with the highest THC content possible. Testing values provide you with the ability to find the right balanced product for each individual patient. Lower THC values can offer the ability to consume your medicine in a more balanced and effective manner. It is important for each patient to try a variety of different THC ranges, not just the highest possible one they can find. Each strain is certainly different and the terpenes associated with that strain, in addition to the THC, can make for a better, more informed patient selection, ultimately leading to a more therapeutic choice.

Cannabinoids

Δ^9 -THC - Δ^9 -TetraHydroCannabinol is a psychoactive compound contained in Cannabis, which contributes to the euphoric, or “high” feeling that is generally associated with its use by most patients. THC has analgesic (pain relieving) effects, neuroprotective and anti-inflammatory qualities, helps stimulate appetite, relieves nausea, and also contributes to other beneficial effects.

CBD - Cannabidiol is a non-psychoactive compound within Cannabis which reduces the psychoactive effects of THC. With qualities ranging from anti-inflammatory, to anti-anxiety, anti-arthritis, analgesic, anti-convulsive and much more, CBD works similarly to THC, but has been shown to modulate its psychoactive effects. Strains rich in CBD are less common than THC rich strains, and many are just now being developed and released specifically for the Medical Cannabis community as an alternative form of this medication.

THCA and CBDA – The A indicates the carboxylic acid form of the molecule which is directly produced by the plant. These compounds decarboxylate with heat to form their neutral counter-parts described above. These compounds are powerful anti-inflammatory agents, but only so when consumed orally, and the plant has not been heated before consumption. These medicinal compounds are most often consumed through juicing or making tea with the plant’s flowers and leaves.

CBN – Cannabinol is a degradation product of THC which can lead to feelings of muscle control loss, and other generally uncomfortable physical effects. CBN isn’t readily found in fresh flowers and is often an artifact of improper analysis.

Terpenes

Terpenes modify the effects of THC and the other cannabinoids, and impact the medicinal effect of the strain. Terpenes are also responsible for some of the smell and taste characteristics. Terpenes are being used to fingerprint and identify each strain in the hopes that we can begin to understand their physiological impacts. Below are some of the highlights of what is generally known so far.

Pinenes: Pine odor, bronchodilator that opens the lungs to more THC absorption. It also increases focus, self-satisfaction, and energy.

Caryophyllene: Sweet, woody, clove taste responsible for anti-inflammatory and neuroprotective effects through CB2 receptor activation.

Linalool: Floral smelling, is believed to provide some anti-cancer effects and is known to cause severe sedation.

Limonene: Has a citrus scent and may possess anti-cancer, anti-bacterial, anti-fungal and anti-depression abilities.

Myrcene: Effects intake of THC by brain cells to increase the overall effects of THC when ingested together.

How We Get the Max Values:

Example: THCA = 17.81 Wt. % and THC = 0.99 Wt. % THC Max = 16.61 Wt. %

Weight of the molecules: THCA = 358.471 g/mol & THC = 314.468 g/mol

Calculating Max from measured values: $THCA * (314.468 / 358.471) + THC = \text{Max Value}$

CBD Max is calculated the same way as CBDA and CBD weigh the same as THCA and THC, respectively.