

Six Primary Terpene Groups

For classification of cannabis and hemp

Terpenes, and terpenoids, are naturally occurring aromatic compounds found in many plants. Often, they are responsible for the characteristic smells (lavender, pine trees, and oranges as examples) and are the major constituent of plant essential oils and resins. Terpenes have extensive uses in everyday life including foods, cosmetics, aromatherapies, perfumes, and pharmaceuticals. The relationship between terpenes and cannabinoids, known as the “entourage effect,” may ultimately differentiate the effects of one strain of cannabis from another.

6 Primary Terpenes

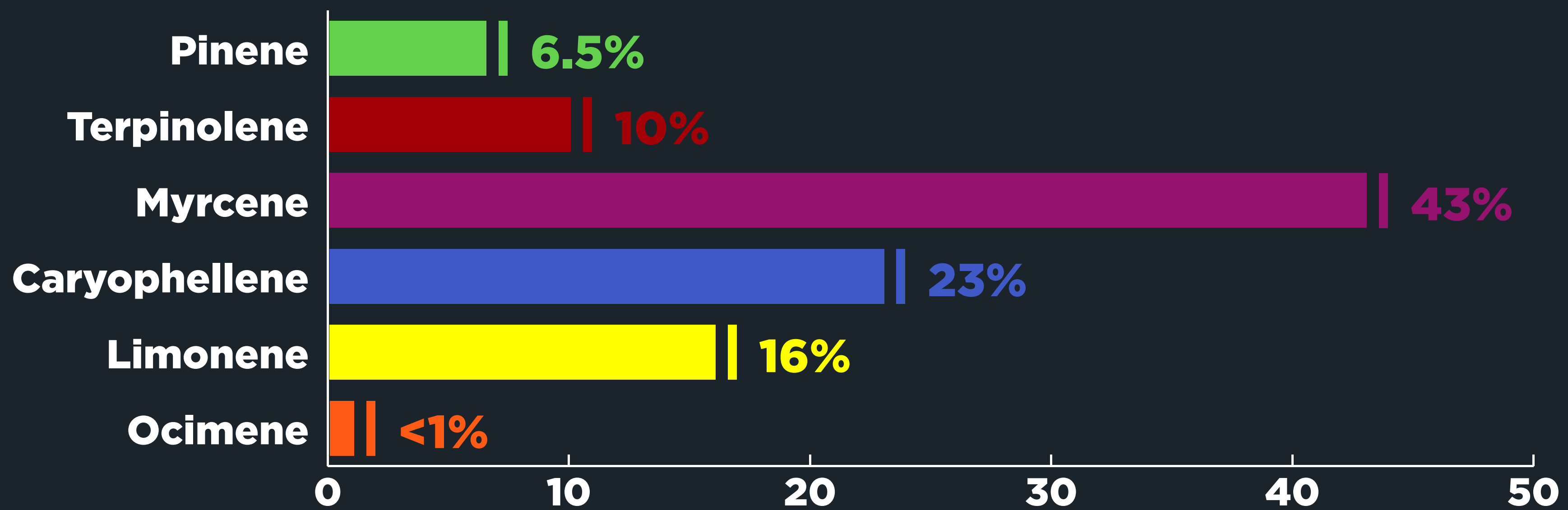
| | Pn | Lm | Cr | Mc | On | Te |
|---|--|--|---|--|--|-----------|
| Pinene | Limonene | Caryophyllene | Myrcene | Ocimene | Terpinolene | |
| One of two isomers of the monoterpene Pinene, the most abundant terpene in the natural world. It is responsible for the distinct aroma of many coniferous trees, particularly pines, from which it derives its name. α -Pinene is found in dill, basil, rosemary, and parsley, in addition to pine needles and other conifers. | A monoterpene with a fragrance that can be described as orangey, citrusy, sweet, and tart. Limonene is common to the lemon and other citrus essential oils, and is the second most widely distributed terpenoid in nature. ¹ | A sesquiterpene with a fragrance that can be described as spicy, dry, woody, dusty, and mildly sweet. β -Caryophyllene is found in black pepper and cloves and is used as a flavoring agent to add spicy and herbal notes. | Myrcene is the terpene most frequently found in cannabis, and is described as earthy and herbal. Myrcene is found in hops, thyme, lemongrass and mango. Strains in which Myrcene is the dominant terpene represent the largest proportion of strains currently available in the market. | Ocimene imparts a sweet, floral and woody scent. Although present in many strains, Ocimene dominant strains of cannabis are rare. It can be found in a wide variety of plants including hops, kumquats, mangoes, basil, bergamot, lavender, orchids, pepper in varying quantities. It is used extensively in the perfume industry due to its aromatic profile. | Terpinolene has a complicated organoleptic profile with a nose described as woody and herbaceous yet floral. It can be found in nature in lilac, tea tree, apples, cummin, and nutmeg. erpinolene is common in strains but usually in small amounts. Strains in which Terpinolene is dominant are much less common. | |
| Offers benefits including anti-inflammation ² , anti-microbial ³ , anti-cancer ⁴ , and anti-anxiety ⁵ . It may be beneficial against a range of degenerative disorders including Alzheimer's disease, dementia, amnesia, cognitive dysfunction, and overall memory loss. ⁶ | The monoterpene produces uplifting and energizing effects thought to be caused by its agonist effects at the serotonin receptor 5-HT1A. ⁷ It may offer promise for those suffering from gastrointestinal issues as D-limonene exhibits anti-inflammatory and antioxidant properties in ulcerative colitis. ⁸ | β -Caryophyllene is one of the only terpenes that is known to interact directly with the endocannabinoid system and produces anti-inflammatory and antinociceptive effects via the CB2 receptors. Additionally, there is evidence that β -Caryophyllene is effective at easing localized ⁹ and neurological ¹⁰ pain. | Myrcene interacts with TRPV1 and the opiate system to produce pain relieving effects. We know this based on studies using pharmacological interventions. When naloxone (Narcan) and opioid antagonist is applied prior to treatment with Myrcene, the analgesic effects of myrcene are blocked. ¹¹ | Ocimene is produced as a defense mechanism in response to insect predation in some plants. ¹² Additionally, there is evidence that Ocimene may have anti-inflammatory properties. ¹⁴ | Studies in mice have shown that its inhalation produces sedating effects ¹³ . This terpene also exhibits anticancer and antioxidant properties ¹⁵ . Recent research is also exploring terpenolene's role in avoiding coronary heart disease in concert with other anti-oxidants. ¹⁷ | |
| | | | | | | |
| Taffy | Wedding Cake | Gelato | Blue Dream | Pink Lemonade | Jack Herer | |
| Sour Carmelo | MAC | Sour Diesel | Purple Punch | Harmony Rose | Durban Poison | |
| Nightcap | Do-si-Dos | Blueberry Muffin | Papaya | Tropical Sleigh Ride | Trainwreck | |
| Associated Strains | | | | | | |

Organoleptic Attributes

| | | | | | |
|------------------------------|--------------------------------------|------------------------------------|-----------------------------|-----------------------|-----------------------|
| | | | | | |
| Also found in: | Also found in: | Also found in: | Also found in: | Also found in: | Also found in: |
| Pine Tea Tree Rosemary | Lemon Rind Juniper Orange Rind | Black Pepper Cloves Cinnamon | Mango Hops Lemongrass | Lavender Orchid | Lilac Patchouli |

Terpenoid Composition

With a wide variability in terpenoid composition, SC Labs finds that strains generally have the following 6 terpenoids as the dominant terpenoid in order from most common to least: Myrcene (~43%), β -Caryophyllene group (~23%), Limonene group (~16%), Terpinolene (~10%), α -Pinene (~6.5%), and the β -Ocimene outlier group (<1%).



Cited Sources/Contact Information



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