

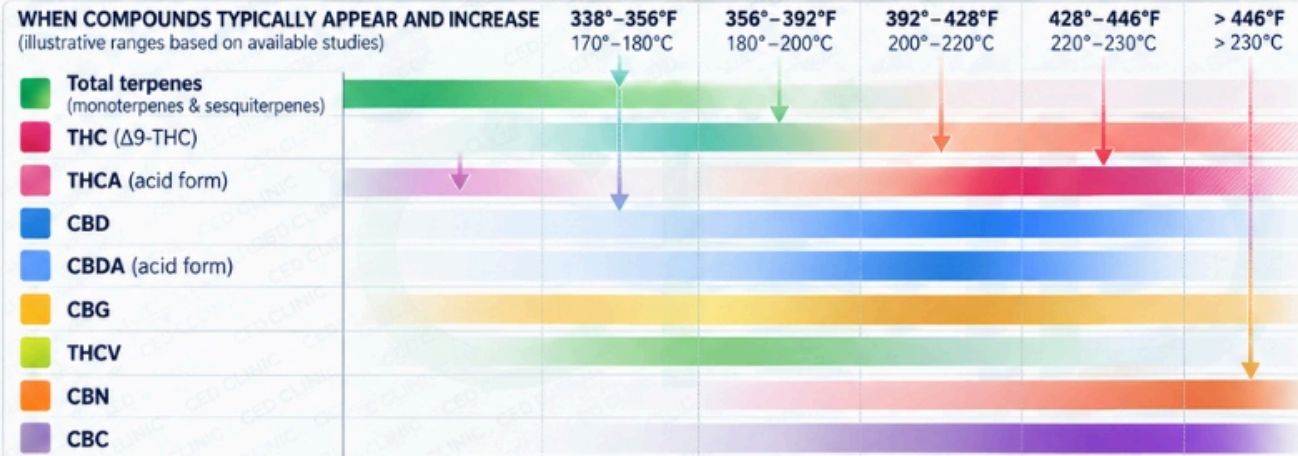
DRY-FLOWER VAPORIZATION GUIDE

TEMPERATURE CONTROLS WHICH COMPOUNDS YOU INHALE

Lower temperatures emphasize flavor and lighter cannabinoid release. Higher temperatures release more cannabinoids. Compounds overlap across ranges.

338° – 356°F 170° – 180°C	356° – 392°F 180° – 200°C	392° – 428°F 200° – 220°C	428° – 446°F 220° – 230°C	> 446°F > 230°C
LIGHT Most terpenes evaporate quickly. Less THC at first, more flavor.	MEDIUM Increasing cannabinoid release. Good balance of flavor and effect.	STRONG Well-studied range. Much more THC and CBD released. Terpene flavor fades.	MAX STUDIED Highest measured yield in lab studies. Very full extraction.	PAST STUDIED No controlled data. Risk of breakdown products and possible scorching.
				
 Flavor: Highest	 Flavor: Moderate	 Flavor: Lower	 Flavor: Minimal	 Flavor: Little to none
 Vapor: Lighter	 Vapor: Moderate	 Vapor: Thicker	 Vapor: Hotter	 Vapor: Very hot/harsh
 Effect: Gentler, slower onset	 Effect: Clearer, more noticeable	 Effect: Stronger, fuller	 Effect: Strongest	 Effect: Not a sensible daily setting

WHEN COMPOUNDS TYPICALLY APPEAR AND INCREASE (illustrative ranges based on available studies)



KEY TAKEAWAYS (for each compound)

- Release early, mostly <392°F
- Increases with heat (notable >392°F)
- Present early, converts to THC with heat (major conversion by ~410°F)
- Increases with heat (notable >392°F)
- Present early, converts to CBD with heat (major conversion by ~410°F)
- Increases with heat (mid to high range)
- Increases with heat (mid to high range)
- Increases at higher temperatures (potential THC breakdown)
- Increases at higher temperatures (limited data)

TERPENE REFERENCE (BOILING POINTS & EFFECTS)

Terpene	Boiling Point	Often Linked To	Evidence
 α-Pinene	311°F (155°C)	Alertness, memory	Unproven
 Myrcene	334°F (168°C)	Sedation, "couch lock"	Unproven
 Limonene	349°F (176°C)	Mood, anxiety relief	Reasoned
 Terpinolene	365°F (185°C)	Calming, sedation	Unproven
 Linalool	388°F (198°C)	Calm, pain relief	Reasoned
 β-Caryophyllene	505°F (263°C)	Inflammation, pain	Reasoned
 α-Humulene	529°F (276°C)	Anti-inflammatory	Reasoned

CANNABINOID REFERENCE (EFFECTS)

Cannabinoid	Often Linked To	Evidence
 THC	Pain, nausea, appetite	Measured
 CBD	Seizures, anxiety, sleep	Measured
 CBG	Calm, mood support	Reasoned
 THCV	Blood sugar, energy	Reasoned
 CBN	Sleep, sedation	Unproven
 CBC	Pain, mood support	Reasoned

QUICK TIPS

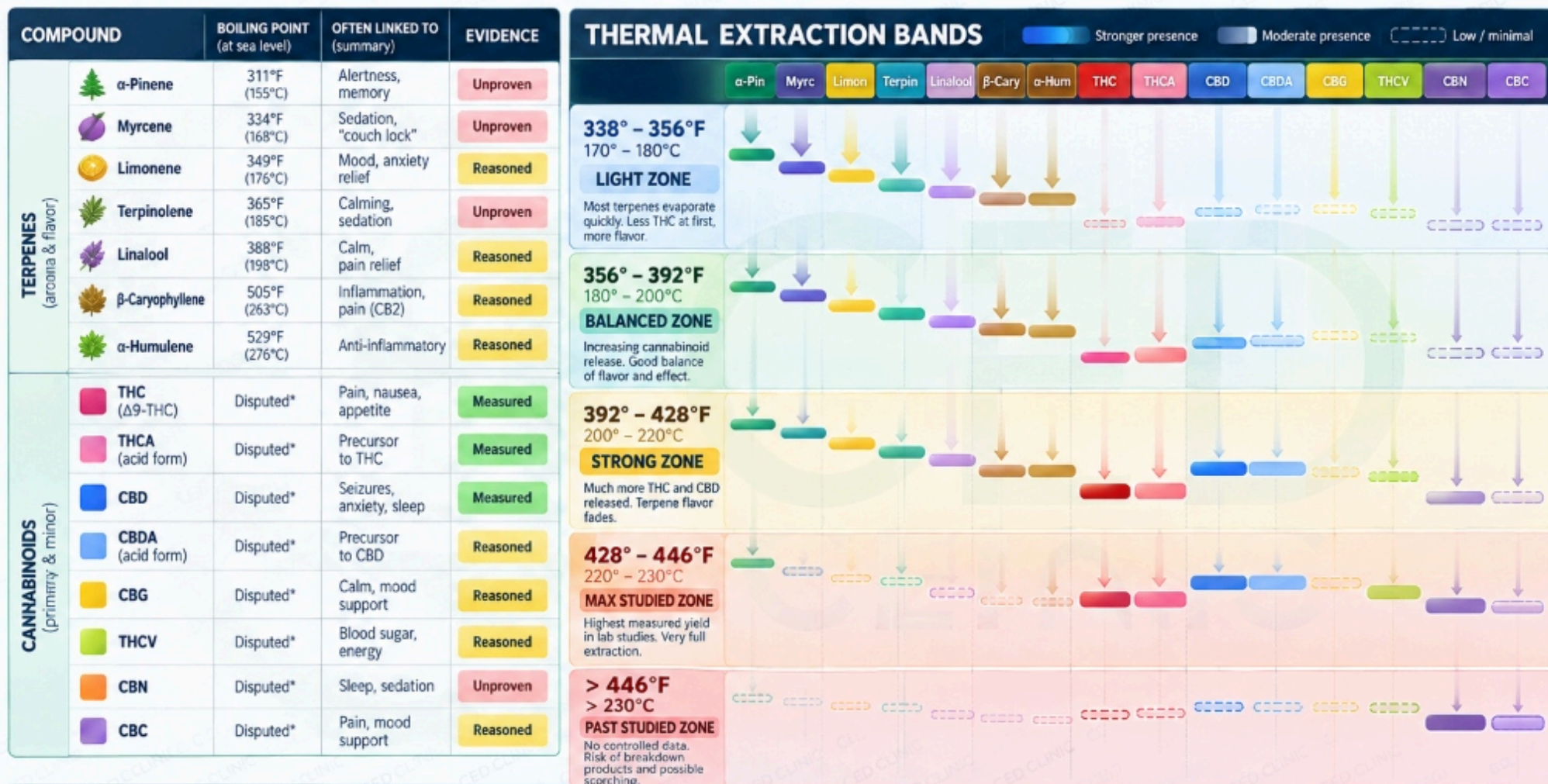
-  Start around 356°F (180°C). Step up in small increments (10–20°F) if you want more.
-  Your flower determines what is available. Check your product's label/COA.
-  Temperature is **not** dose. Device, load size, grind, airflow and number of inhales all matter.

COA-TO-VAPORIZER CONSUMPTION MATRIX

MATCH YOUR PRODUCT PROFILE TO PRACTICAL TEMPERATURE BANDS

When each compound is likely to be present in the vapor, and what you may notice.

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HOW TO USE THIS CHART

- 1 Check your COA**
Find the dominant compounds in your product and note their colors.
- 2 Choose a temperature band**
Use the band where your target compounds are most active.
- 3 Adjust as needed**
Start near 356°F (180°C) and increase in 10–20°F steps if you want more.

KEY TAKEAWAYS

- Your flower determines what is available. Read its lab-tested COA first.
- More heat means faster, fuller release. Flavor compounds leave before most THC scorching.
- Temperature is **not** dose. Device, load size, grind, airflow and number.

Boiling points are physical constants, not exact vaporizer settings. Cannabinoid boiling points are disputed; shown by extraction behavior, not single-point values.

Educational information only; not medical advice. Effects vary by person, product and device. © 2026 CED Clinic LLC | cedclinic.com

VAPORIZER TEMPERATURE STUDIES & AEROSOL KINETICS

What you are likely inhaling as the heat rises, and how sure we are.

EVIDENTIARY STANDARD:	MEASURED Measured in a published study or controlled human trial.	REASONED Early evidence: small human studies, animal/lab work, or physical constants.	UNPROVEN A popular claim without good empirical support.
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Laboratory Measurements Across Temperature Bands

Real-world evaporation rates, conversion kinetics, and byproduct ratios

WHAT THE STUDIES SHOW		WHAT YOU MAY NOTICE
338° to 356°F 170° to 180°C Light Zone	MEASURED At 356°F, most monoterpenes and much of the heavier terpenes evaporate within 20 to 40 seconds, before much THC leaves the flower (only ~10% at 20s, ~20% at 40s). THCA conversion to THC approaches completion within about 40 seconds. MEASURED One lab study found its poorest cannabinoid-to-byproduct ratio at 338°F.	REASONED Most flavor, gentler functional effect, slower THC delivery.
356° to 392°F 180° to 200°C Balanced Zone	REASONED Physics predicts THC evaporates roughly 3 times faster for each 36°F step up (calculated from measured vapor pressures, not a device test). REASONED Little direct testing in this specific band; falls between the rows above and below.	REASONED Rich flavor combined with a clearer, noticeable cannabinoid effect.
392° to 428°F 200° to 220°C Strong Zone	MEASURED The best-studied zone: At 410°F, one comparison of commercial vaporizers released 55% to 83% of available THC and 46% to 70% of CBD, depending on the device. Electric models converted ≥97% of THCA and ≥95% of CBDA. MEASURED At 428°F, about 34% of THC evaporated by 20s and 50% by 40s; THCA conversion was practically complete within 20s.	REASONED Stronger physiological effect and thicker vapor. Terpene flavor fades quickly because most aromatic compounds are already gone.
428° to 446°F 220° to 230°C Max Studied Zone	MEASURED A 2009 laboratory study found its highest THC yield and best cannabinoid-to-byproduct ratio at 446°F. REASONED Running settings too hot risks thermal breakdown of THC into other compounds (e.g. CBN).	REASONED Strongest, hottest vapor. Can feel harsh on airways. Minimal flavor remaining.
Above 446°F > 230°C Past Studied Range	UNPROVEN No controlled data in this range. Heat-driven breakdown products (reactive VOCs) rise with power in vape devices, and certain devices begin to scorch plant material. Always follow your device limits.	UNPROVEN Not a sensible or health-conscious daily setting.

THREE THINGS TO REMEMBER

- Your flower decides what is available:** Read its lab-tested Certificate of Analysis (COA) first.
- More heat means faster, fuller release:** Aromatic flavor compounds leave well before most THC.
- Start near 356°F:** Step up in small increments (10–20°F) only if you need deeper, heavier relief.

TEMPERATURE IS NOT DOSE

In a benchmark comparison of commercial vaporizers set to 410°F, THC extraction ranged from **55% to 83%** solely based on device mechanics. Chamber load, grind consistency, draw rate, inhale duration, and device thermal stability all dictate delivery. Treat temperature as direction, not absolute dosing.

CLINICAL COMPOUND REFERENCE & EVIDENCE BASE

What each compound is often linked to, and how much clinical evidence stands behind it.

	BOILING POINT	OFTEN LINKED TO	WHAT THE EVIDENCE SAYS
CANNABINOIDS			
THC (Δ9)	Disputed*	Pain, nausea, appetite	<div>MEASURED</div> Moderate-quality trial evidence supports cannabinoid medicines for chronic pain. <div>REASONED</div> Low-quality evidence for chemotherapy nausea, HIV cachexia, and sleep. Side effects like dizziness are common.
CBD	Disputed*	Seizures, anxiety, sleep	<div>MEASURED</div> Purified oral CBD significantly reduced seizures in Dravet syndrome in a controlled trial. <div>REASONED</div> Anxiety evidence remains low quality with limited clinical benefit. <div>UNPROVEN</div> CBD-only therapy showed no significant sleep benefit in pooled trials.
CBN	Disputed*	Sleep / Sedation	<div>UNPROVEN</div> A small controlled clinical trial failed to improve primary sleep metrics. Systematic reviews conclude evidence does not support popular claims for CBN as a sleep aid.
CBG	Disputed*	Calm, mood support	<div>REASONED</div> One small crossover trial: a 20 mg oral dose reduced anxiety ratings in healthy adults. No inhaled human pharmacokinetic data.
CBC	Disputed*	Pain, mood support	<div>REASONED</div> Mouse and preclinical models only (anti-nociception). No human clinical trials published.
THCV	Disputed*	Blood sugar, energy	<div>REASONED</div> In one pilot trial in type 2 diabetes, oral THCV lowered fasting glucose. Dose-ranging trials found euphoric mood the most frequent side effect.
TERPENES (AROMA & FLAVOR COMPOUNDS)			
α-Pinene	311°F (155°C)	Alertness, memory	<div>UNPROVEN</div> In human trials, inhaled α-pinene alone had no clinical effects and did not mitigate THC memory impairment. <div>REASONED</div> Animal models demonstrate anti-inflammatory and anti-nociceptive behavior.
Myrcene	334°F (168°C)	Sedation, "couch lock"	<div>UNPROVEN</div> Not demonstrated in human trials. Rodent studies conflict (sedation in one; no locomotor changes in another).
Limonene	349°F (176°C)	Mood, anxiety relief	<div>REASONED</div> In a controlled human trial, inhaled vaporized limonene co-administered with THC selectively reduced THC-related anxiety. Inhaled alone, it had no effect.
Terpinolene	365°F (185°C)	Calming, sedation	<div>UNPROVEN</div> No human clinical data. One rodent study showed attenuation of chemotherapy-induced neuropathy.
Linalool	388°F (198°C)	Calm, pain relief	<div>REASONED</div> Anxiolytic effects in mice depend on olfaction. Small human studies showed reduced cortisol in one and decreased post-herpetic neuralgia in another.
β-Caryophyllene	505°F (263°C)	Inflammation, pain	<div>REASONED</div> Binds directly to peripheral CB2 receptors; reduced inflammation in animal models. No intoxicating psychoactivity. No human clinical trials.
α-Humulene	529°F (276°C)	Anti-inflammatory	<div>REASONED</div> In vitro cell and preclinical animal assays only. No human clinical trials completed.
FLAVONOIDS			
Canflavin A & B	No Data	Anti-inflammatory	<div>REASONED</div> Potent in vitro inhibition of inflammatory mediators. No human trials exist, and no evidence confirms they transfer into inhalable vapor.

***Note on Boiling Points:** Boiling points reflect physical constants at sea level, not direct vaporizer settings: volatile terpenes evaporate rapidly well below their boiling thresholds (even sesquiterpenes evaporate quickly at 356°F). Published estimates for cannabinoid boiling points disagree by over 300°F (from ~473°F up to ~797°F for THC in modern physical chemistry literature), so single-degree markers are scientifically unsupportable and deliberately omitted.

SELECTED PEER-REVIEWED FOUNDATIONS Aerosol Kinetics & Thermodynamics: Eyal AM, et al. <i>Cannabis Cannabinoid Res.</i> 2023;8(3):414-425 • Lanz C, et al. <i>PLoS One.</i> 2016;11(1):e0147286 • Pomahacova B, et al. <i>Inhal Toxicol.</i> 2009;21(13):1108-1112 • Hazekamp A, et al. <i>J Pharm Sci.</i> 2006;95(6):1308-1317 • Beuning CN, et al. <i>J Breath Res.</i> 2026;20(1) • Turovsky EH, et al. <i>J Cannabis Res.</i> 2025;8(1):9 • Meehan-Atrash J, et al. <i>RSC Adv.</i> 2021;11(19):11714-11723.	Clinical Cannabinoid Evidence: Bilbao A, Spanagel R. <i>BMC Med.</i> 2022;20(1):259 • Whiting PF, et al. <i>JAMA.</i> 2015;313(24):2456-2473 • Solmi M, et al. <i>BMJ.</i> 2023;382:e072348 • Devinsky O, et al. <i>N Engl J Med.</i> 2017;376:2011-2020 • Raminelli AO, et al. <i>Cannabis Cannabinoid Res.</i> 2025;10(6):655-672 • da Silva GHS, et al. <i>Sleep Med Rev.</i> 2025;84:102156 • Lavender IG, et al. <i>J Sleep Res.</i> 2026;35(4):e70284 • Cuttler C, et al. <i>Sci Rep.</i> 2024;14(1):16163 • Jadoon KA, et al. <i>Diabetes Care.</i> 2016;39(10):1777-1786.	Terpenoid Clinical & Preclinical Trials: Spindle TR, et al. <i>Drug Alcohol Depend.</i> 2024;257:111267 (Limonene) • Kumar L, et al. <i>Med Cannabis Cannabinoids.</i> 2025;8(1):144-157 (Pinene) • Gertsch J, et al. <i>PNAS.</i> 2008;105(26):9099-9104 (Caryophyllene) • You J, et al. <i>BMC Complement Med Ther.</i> 2024;24(1):54 (Linalool) • Russo EB. <i>Br J Pharmacol.</i> 2011;163(7):1344-1364.
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