TOP TREE HERBS

BEHIND THE BREW: ALKALOIDS & CHEMISTRY

Behind the magic of kratom tea? Factors like genetic variability, regional climate, and chemistry all impact what's in your cup. Kratom's active compounds *aren't* highly water soluble, so adjusting heat, time, and acidity can make a big difference.

KRATOM'S ACTIVE COMPOUNDS

Kratom leaves contain a range of compounds, including:

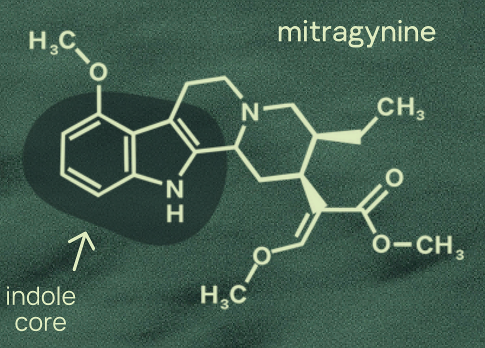
- Flavonoids (plant antioxidants)
- Tannins (bitterness + color)
- Terpenes (aroma + subtle flavors)
- Fibrous plant material (what holds everything together)
- **Alkaloids (the main active compounds)**

40+ alkaloids have been found in kratom trees' leaves.

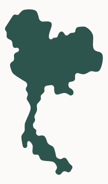
- **Major alks:** includes mitragynine, speciogynine, paynantheine, & speciociliatine
- **Minor alks:** (metabolites usually found in trace quantities) includes 7-hydroxymitragynine & mitragynine pseudoindoxyl

PROPERTIES OF KRATOM'S ALKALOIDS

→ Low water solubility
→ Sensitive to pH and heat
→ Slightly polar, slightly non-polar
→ Easier to extract with the right combo of heat + time + acidity



A kratom product's alkaloid content is influenced by factors like: plant genetics, growing region (e.g., Indonesia vs. Thailand, regional climate, soil type), harvesting time (e.g., young vs. mature leaves, summer vs. winter), fermentation & drying methods, sanitization methods, storage methods, and processing (like extraction or synthesis).



HOW DOES THIS IMPACT BREWING?

1. Increase Water Temp: Heat helps break down plant cell walls release alkaloids from the fibrous leaf material, so make sure to use very hot water. To maintain a high water temp, don't use a regular mug—instead, steep your tea in an insulated thermos or in a pot on the stove.

2. Increase Steep Time: Kratom leaves are tough. A longer steep time (15–25 minutes) will get you a stronger brew.

3. Increase Acidity: A small amount of lemon, lime, or apple cider vinegar can strengthen your brew. Kratom's alkaloids can degrade if they're in an acidic liquid for a long time, so don't do this if you're storing tea for later.

4. Resteep: Since you won't extract all of the alkaloids from the leaves when making a cup of kratom tea, you can often resteep your tea bags (or loose leaf tea) a second time to get more out of them.

1 tea bag (or 3g loose leaf tea)

205-212°F (96-100°C)

8-12 oz water

15-25 minutes

A note on ongoing research: *Kratom scientists are actively researching many of the aspects of kratom chemistry we discussed above, from how the growing region affects kratom's alkaloid composition, to the stability of various alkaloids in different temperatures or acidity levels. This field is developing rapidly, and we'll update this guide as often as possible with more details.*