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Why Wax Temperature Matters (and Why You Shouldn't Heat Fragrance Oils)

When making candles, the way you combine your fragrance oil with the wax can make or break the final result. Many beginners wonder: *Should I heat the fragrance oil before mixing it into the wax?* The short answer: **no — you only heat the wax, never the fragrance oil.**

The Role of Wax Temperature

Wax is a crystalline material. When melted, molecules move freely and allow fragrance oils to disperse evenly.

If you add fragrance when the wax is **too cold**, crystallization has already begun → poor binding, sweating, and weak scent throw.

If you add fragrance when the wax is **too hot**, volatile top notes can evaporate, dulling the fragrance.

Reference ranges:

For most **soy/container waxes** → add fragrance between **65 °C – 75 °C**.

For **paraffin or blends** → usually a bit higher, **70 °C – 85 °C**, depending on the supplier's data sheet.

Always check the **TDS (Technical Data Sheet)** of the wax: manufacturers usually specify a "fragrance addition temperature."

Mixing: Stir slowly but thoroughly (at least 2 minutes) so the oil disperses evenly at the molecular level.

Flash point note: Fragrance flash point is about safe handling/shipping, not the exact point it "burns off" in wax. Still, it's a good reference: don't pour fragrance into wax hotter than ~10–15 °C above the fragrance's flash point.

Why You Shouldn't Heat Fragrance Oils

Fragrance oils are designed to be added at room temperature. Heating them separately risks:

Volatile loss (light notes evaporate before binding to wax)-Many top notes (citrus, green, herbal molecules) evaporate easily. Heating fragrance alone drives them off before they even touch the wax.

Chemical degradation (sensitive compounds break down)-Some delicate compounds (like vanillin, ionones, aldehydes) can break down if exposed to direct heat without wax acting as a buffer.

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Safety issues (fragrance oils are flammable if overheated)-Fragrance oils are flammable. Heating them outside wax is unnecessary and adds fire risk.

Why you heat the wax and not the fragrance oil

Wax is a crystalline solid

Vegetable waxes (soy, rapeseed, coconut) and paraffin are **crystalline materials** when solid. To incorporate fragrance, the wax must be fully melted and above its **congealing point**, otherwise crystals start forming and the fragrance can't penetrate the wax structure evenly.

Molecular solubility

Fragrance oils are liquid mixtures of esters, alcohols, aldehydes, terpenes, etc.They dissolve more readily into **hot molten wax** because the wax molecules are moving freely in liquid state.At lower temps, wax viscosity increases → fragrance stays suspended, leading to sweating, uneven scent throw, or separation.

Crystalline arrangement & cure time

As the wax cools, molecules reorganize into crystalline structures. If fragrance is properly dissolved at the right temp, it becomes **entrapped within the crystal lattice**. That's why candles need a cure time — crystals stabilize, and the fragrance distribution becomes uniform.

Rule of thumb: Heat the wax, not the fragrance oil.

Candle making is both science and art. The right wax temperature ensures fragrance binds properly, giving strong scent throw and stable candles.

Pro Tip: Keep a chart with melting, fragrance addition, and pouring temperatures for each wax type you use.

Please check the safe & effective process below

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