

Short answer: Under the federal hemp changes scheduled to take effect in 2026, hemp's THC limit is based on **total THC**, not delta-9 THC alone. That means THCA is included after applying a conversion factor: **total THC = delta-9 THC + (0.877 × THCA)**.



The change matters because a product can test below a delta-9 limit while still containing enough THCA to exceed a total-THC limit. It also introduces a stricter federal limit based on the amount of THC in the entire container—not just each serving. The transition has two dates to track: **November 12, 2026**, and **December 11, 2026**. Businesses should check the final statutory language and agency guidance for which requirements apply on each date, as state rules may differ.

What does “total THC includes THCA” mean?

THCA (tetrahydrocannabinolic acid) is the acidic precursor to delta-9 THC. It is commonly found in raw cannabis and hemp material. When heated, THCA can lose a carboxyl group and convert into delta-9 THC—a process called decarboxylation. Since that conversion can happen when cannabis is smoked, vaporized, or cooked, a test that counts delta-9 alone may not reflect the product's potential intoxicating THC content.

Under a total-THC approach, a lab result accounts for both delta-9 THC already present and the delta-9 THC that could result from THCA. The calculation uses the factor **0.877**, which estimates the mass change when THCA converts to delta-9 THC:

$$\text{Total THC} = \text{delta-9 THC} + (0.877 \times \text{THCA})$$

A quick math example

Suppose a product tests at 0.10% delta-9 THC and 1.00% THCA:

- THCA contribution: $1.00\% \times 0.877 = 0.877\%$
- Total THC: $0.10\% + 0.877\% = 0.977\%$

So even though the delta-9 result is only 0.10%, the calculated total THC is 0.977%. That is why “delta-9 only” is not the same as a total-THC result.

Why use the 0.877 conversion factor?

THCA and delta-9 THC are related, but they do not have exactly the same molecular mass. During decarboxylation, THCA releases carbon dioxide and becomes delta-9 THC. The 0.877 factor accounts for that difference, estimating how much delta-9 THC could result from the measured THCA.

In practice, a lab may report delta-9 THC and THCA separately, as well as a calculated total-THC [2018 farm bill hemp definition](#) result. Check the report's definitions and calculation notes rather than assuming that a number labeled "THC" includes both compounds. A certificate of analysis (COA) should identify the tested batch, list the cannabinoid results clearly, and explain whether the reported figure is delta-9 THC or total THC.

What changes in the federal hemp definition?

The federal change shifts the focus from hemp products' delta-9 THC concentration alone toward a broader assessment that includes THCA and other relevant THC forms. As the change takes effect, a product that previously appeared to meet a delta-9-only threshold may no longer qualify under the revised standard.

This is a significant distinction for flower, concentrates, and other products marketed for heating or inhalation. A product's raw test result may show substantial THCA even when its delta-9 THC number is low. Under the total-THC calculation, the THCA contribution counts.

It is important not to turn that federal change into a blanket statement that every hemp-derived product is automatically unlawful, or that a product is "legal in all 50 states." Federal definitions, product restrictions, enforcement guidance, and state laws can interact in different ways. States may set their own limits, restrict certain product types, or impose rules that are already stricter than the federal standard.

Why is the per-container THC cap stricter?

A concentration limit and a per-container limit answer different questions. A concentration limit measures THC relative to the product's weight or volume. A per-container cap looks at the total amount of THC in the package. That can make the container limit more restrictive, especially for products with many servings.

Per serving versus per container: quick math

Imagine a hypothetical product with 0.3 mg of THC per serving and 20 servings in the package:

- Per serving: 0.3 mg THC
- Servings per container: 20
- Total per container: $0.3 \text{ mg} \times 20 = 6 \text{ mg THC}$

A shopper might see a small per-serving amount and assume the whole package is within a limit. But if a rule caps THC per container, the relevant number is 6 mg—not 0.3 mg. The same principle applies to gummies, beverages, tinctures, and other multi-serving products: calculate the total across the package and compare it with the applicable container cap.

Always confirm what the rule counts as a "container," how it treats servings, and whether it measures delta-9 THC or total THC. Packaging size, serving instructions, and a lab's unit of measurement can all affect the comparison.

What are the two 2026 dates?

The federal transition is commonly discussed in two stages: **November 12, 2026**, and **December 11, 2026**. Because the dates are close together, businesses should avoid treating them as interchangeable. They should verify the precise effective date for each provision in the enacted law and monitor agency guidance for implementation details.

Milestone What to track Practical next step November 12, 2026 The scheduled first phase of the federal hemp-definition changes, including the move toward total-THC accounting. Review formulas, product specifications, and current COAs for THCA and total THC. December 11, 2026 A later scheduled milestone in the transition. Confirm which additional requirements apply by checking the law and current agency guidance. Recheck product eligibility, package-level calculations, and state-specific rules before selling or shipping.

These dates are not a substitute for reading the governing text. Regulatory provisions can have different effective dates, and later agency guidance can clarify how they are administered. If you manufacture, distribute, or sell hemp products, have compliance counsel review the exact provisions that apply to your product category and location.



How should shoppers and retailers read a COA?

A COA is useful only if it matches the product in front of you. Look for the batch or lot number, sample date, lab identification, and clear cannabinoid results. Third-party lab testing can provide an independent check, but the report still needs to be current, complete, and tied to the specific batch being sold.

COA checks worth doing

- **Check the batch number.** The report should correspond to the product's lot, not just the brand or product name.
- **Look for both delta-9 THC and THCA.** A report showing only delta-9 may not answer a total-THC question.
- **Find the calculated total.** Confirm whether the lab provides total THC and whether its calculation uses delta-9 plus 0.877 times THCA.
- **Check units.** Percent, milligrams per gram, milligrams per serving, and milligrams per container are not interchangeable without conversion.

- **Review the date.** An old lab report reused for a new batch is not a reliable batch-specific result.

For example, if a COA reports 0.5 mg of total THC per serving and the package contains 10 servings, the package total is $0.5 \text{ mg} \times 10 = 5 \text{ mg}$. That container-level figure may matter more than the serving number when the applicable rule sets a per-container cap.

What about “THC-free” claims?

“THC-free” can be confusing because it may be used to describe products with no detectable THC, products with THC below a lab’s reporting limit, or products that simply meet a particular threshold. Those claims do not all mean the same thing.

A responsible claim should be supported by a current, batch-specific COA that reports relevant THC compounds, including THCA where applicable. “Non-detect” also needs context: it means the lab did not detect a compound above its method’s detection or reporting threshold—not necessarily that no molecule is present. Check what the lab tested for and the limits it reports.

What should hemp businesses do before the transition?

1. **Recalculate products.** Use the total-THC formula where applicable: delta-9 plus 0.877 times THCA.
2. **Calculate package totals.** Multiply THC per serving by the number of servings to compare with any per-container limit.
3. **Update testing practices.** Ask labs for clear delta-9, THCA, and total-THC reporting, along with the method and units.
4. **Audit inventory and labels.** Match COAs to current lots and review claims, serving sizes, and package quantities.
5. **Track each jurisdiction.** Federal compliance does not erase state rules. Confirm requirements for every state where products are sold or shipped.
6. **Train staff to explain the math.** Keep answers factual: show the COA, explain the conversion, and avoid promising that a product is legal everywhere.

Brands such as Joy Organics are part of a crowded hemp market where clear product information and accessible testing matter to customers. Regardless of brand, shoppers should be able to find a current COA and understand what its cannabinoid numbers mean.

The bottom line

For the upcoming federal hemp changes, the key point is that **total THC includes THCA**. The relevant calculation is **delta-9 plus 0.877 THCA**, which estimates the delta-9 THC potential after THCA conversion. A low delta-9 result alone may not tell the whole story, and a low per-serving amount may still add up to a higher per-container total.

As November 12 and December 11, 2026 approach, confirm the exact requirements and effective dates that apply to your product and location. Use current third-party lab testing, read the full certificate of analysis, and treat broad claims like “THC-free” or “legal in all 50 states” cautiously unless the evidence and applicable rules support them.