

# Caliper 5% CBD Powder delivers CBD into the bloodstream **significantly faster** — **142x** faster than isolate and **22x** faster than tinctures\*

## Clinical Substantiation Matters

At Caliper Ingredients, we invest heavily in **credible research to substantiate our product claims**.

Pharmacokinetic data (including rate and speed of absorption) are a critical foundation for claims such as “fast acting,” or “superior bioavailability.” This is the **first human clinical substantiation** of such claims—and the first to do so using **commercially available CBD products**.

### THE STUDY

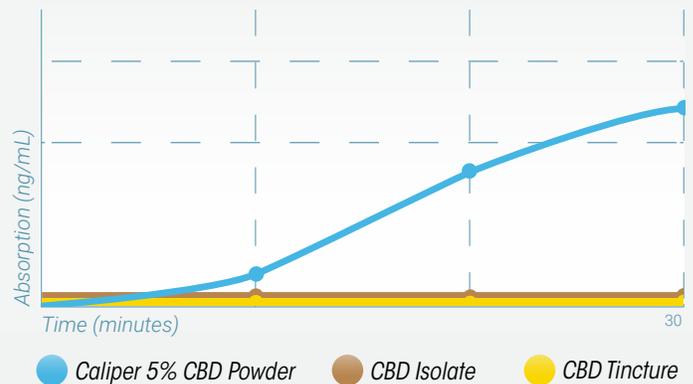
## Human Subjects, Rigorous Design

Colorado State University researchers compared pharmacokinetics of Caliper’s suite of soluble cannabinoid ingredients against two controls: oil-based CBD tincture and unemulsified CBD isolate—the forms most widely available to today’s consumers.

- Colorado State University IRB-approved
- Double-blind, randomized crossover design
- 15 healthy male & female subjects, ages 21–62
- 30mg dose of each product given on five different days
- All subjects had fasted for 6 hours
- Blood samples were taken at 0, 10, 20, 30, 45, 60, 120, 180, & 240 minutes following ingestion
- CBD blood levels were determined using UHPLC mass spectrometry

**All Caliper CBD ingredients absorbed dramatically faster than oil-based CBD tincture or CBD isolate.**

## Absorption of 5% Caliper CBD Powder versus CBD Isolate and Tincture



- **Absorption began within 10 minutes** — significantly faster than either control.
- At 30 minutes, Caliper 5% CBD Powder was absorbed **142x faster** than isolate, and **22x faster** than tincture.



\*2021 Colorado State University study, *Pharmaceuticals*.

**We're ready to help you innovate with *clinically proven* cannabinoid products.**

Contact your account manager or email us at [ingredients@caliper.life](mailto:ingredients@caliper.life) | [www.caliperingredients.life](http://www.caliperingredients.life)

# Our Products

We are ready to help move your cannabinoid innovation forward.

Contact your account manager or email us at [ingredients@caliper.life](mailto:ingredients@caliper.life)

| Product Name  | Cannabinoid Concentration | Applications & Benefits   | Incorporate By                        |
|---|---------------------------|---|---------------------------------------|
| <i>LIQUID</i>   |                           |   |                                       |
| 20% CBD Liquid Concentrate (SKU: TL-Q-20)                       | 20% CBD                   | <b>RTD beverages, shots, gummies, baked goods, confections, topicals.</b><br><br><b>Excellent heat &amp; process stability.</b> | 6 months from date of manufacturing.  |
| 20% Composed Broad Spectrum Liquid Concentrate (SKU: CB-L-Q-20) | 20% CBD<br>1% CBG         |   |                                       |
| 5% CBD Liquid Concentrate (SKU: TL-A-5)                         | 5% CBD                    |   |                                       |
| 5% Composed Broad Spectrum Liquid Concentrate (SKU: CB-L-A-5)   | 5% CBD<br>0.25% CBG       |   |                                       |
| <i>POWDER</i>   |                           |   |                                       |
| 5% CBD Powder (SKU: TP-S-5)                                     | 5% CBD                    | <b>Bars, drink mixes, gummies, capsules, tablets.</b><br><br><b>Flowable powder, long shelf-life, quick dissolving.</b>         | 14 months from date of manufacturing. |
| 5% Composed Broad Spectrum Powder (SKU: CB-P-S-5)               | 5% CBD<br>0.25% CBG       |   |                                       |
| 10% CBD Powder (SKU: TP-S-10)                                   | 10% CBD                   |   |                                       |
| 10% Composed Broad Spectrum Powder (SKU: CB-P-S-10)             | 10% CBD<br>0.5% CBG       |   |                                       |



Non-GMO | Kosher | Vegan | All Natural Flavors | Gluten-Free | Sugar-Free | Preservative-Free