

# SuppCo Tested: Berberine

**ISSUE 4: OCTOBER 14, 2025** 



### The SuppCo Tested Program

At SuppCo, we believe supplements should deliver what they promise, and the only way to know for sure is through independent verification. That's why we created SuppCo Tested, a program dedicated to uncovering what's really in the most talked-about supplements on the market. No brand pays us to participate. We do not take recommendations.

Every product is bought anonymously, sent to an ISO 17025-accredited lab, and tested with strict scientific protocols. If a product fails, it's tested again to confirm the results. This process ensures our findings reflect reality, not marketing spin.

The mission is simple: help people cut through hype and choose supplements that meet basic standards of identity and purity. Over the past year, we've revealed surprising inconsistencies in categories like Creatine, NAD\*, and Urolithin A.

Sometimes we find excellence, with brands going above and beyond to deliver. Other times, we uncover shocking underperformance, with products containing a fraction, or none, of what's on the label. Either way, the goal is transparency.

Berberine is a perfect candidate for this type of scrutiny. It has exploded in popularity over the past two years, largely due to social media buzz framing it as "nature's Ozempic." With so much hype, the category has grown crowded with new brands, novel delivery forms, and bold claims. But with popularity comes risk: quality shortcuts, misleading labels, and inconsistent sourcing. That's why this round of testing matters.

From my own perspective, I've seen this cycle play out repeatedly. A compound with solid science behind it, like berberine's effects on glucose and lipid metabolism, becomes wildly popular. Soon after, the marketplace fills with products that don't live up to expectations.

My "wisdom nugget" here: hype accelerates faster than quality. That's the exact moment independent testing becomes most valuable.

Jordan Glenn, PhD SuppCo Head of Science



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## Table of Contents

Berberine: What It Is, How It Works, Why It Matters	04
"Nature's Ozempic"? The real benefits behind berberine	04
Dosage Considerations	05
Safety Profile	05
What We Tested, And What We Found	06
What We Looked For:	06
So What Did We Find?	07
Key Takeaways	08
Dosage Claim Issues	09
The "Too Good to Be True" Price Tag	10
Why Amazon Badges and Ratings Don't Guarantee Quality	11
Gummies: A Recurring Problem	12
Reviewing The Correlation Between TrustScore And Berberine Results	12
Where We Go From Here?	14
Let's Make Sense of Supplements	15
Appendix: Heavy Metals Screening	16
Results	16
Takeaway	16



# Berberine: What It Is, How It Works, Why It Matters

#### "Nature's Ozempic"? The Real Benefits Behind Berberine

**Berberine** is a naturally occurring alkaloid found in plants like barberry, goldthread, and tree turmeric. Its best-known action is activating AMPK, the body's internal "fuel gauge." When AMPK is switched on, cells pull in more glucose, become more sensitive to insulin, and burn fat more efficiently. This explains why berberine repeatedly shows benefits for blood sugar, triglycerides, and cholesterol in human trials.

But AMPK is only part of the story. Berberine also works in the gut, where it can reshape the microbiome in ways that support glucose control and lipid balance. It dampens liver gluconeogenesis, lowering fasting blood sugar, and may improve the health of blood vessels themselves by enhancing endothelial function. Taken together, these mechanisms make it a rare natural compound acting on multiple fronts: metabolic, cardiovascular, and even inflammatory.

Clinical trials back this up. In people with type 2 diabetes, berberine has been shown to reduce fasting glucose, HbA1c, triglycerides, and LDL cholesterol, while sometimes raising HDL. Small but consistent reductions in body weight and waist circumference also appear in the data, making it a useful tool for metabolic syndrome. These results explain why some call it "nature's Ozempic," though the comparison is misleading. Berberine does not act on GLP-1 receptors, and its effects are more modest and variable than prescription drugs like semaglutide (the generic name for Ozempic).

However, berberine faces a well-documented challenge: **poor oral bioavailability.** It is not absorbed efficiently in the gut and is rapidly metabolized. This has driven the rise of enhanced delivery methods, phytosome complexes, liposomal encapsulations, or pairing with piperine.

[Spoiler Alert] As our testing shows, some of these products promoting delivery mechanisms failed spectacularly, often containing little to no berberine despite the enhanced marketing.

The bottom line: berberine is not a miracle weight-loss drug, but it is one of the most evidence-backed plant compounds for improving blood sugar and lipid profiles. For people with insulin resistance, type 2 diabetes, or metabolic syndrome, it may be a meaningful ally, especially when paired with healthy diet and exercise.

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## Berberine: Dosage, Safety

#### **Dosing Considerations**

Most clinical studies use doses of **900-1,500 mg per day**, divided into two or three servings of ~450-500 mg each. This range appears to deliver the most consistent improvements in glucose and lipid outcomes. Some trials have used lower doses with mild effects, but consistency improves as total daily intake approaches the higher end of this range.

A practical tip: stick with standard capsule formulations from trustworthy brands that pass independent testing. A realistic serving size (often 500 mg taken two to three times daily with meals) is both aligned with the clinical literature and more reliable at this point, as opposed to chasing exotic delivery claims.

#### **Safety Profile**

Berberine is generally well tolerated, but like any bioactive compound, it comes with considerations. The most common side effects are **gastrointestinal**, cramping, diarrhea, constipation, or nausea, especially at higher doses or when starting supplementation. These usually resolve as the body adapts, particularly when doses are spread across meals.

Because berberine can lower blood glucose, it may **interact with diabetes medications**, raising the risk of hypoglycemia if not monitored. For the same reason, individuals with existing metabolic conditions should consult their healthcare provider before adding berberine.

Animal studies and emerging human data suggest berberine is safe for long-term use at clinically studied doses, but data beyond one year remain limited. Pregnant and breastfeeding women should avoid berberine, as its safety profile is not well studied in these populations.

One additional note: because berberine acts on liver enzymes, it may interact with certain medications metabolized through the liver. While the risk is generally low, it highlights the importance of checking for drug interactions before long-term use. As always, it is best to consult with a doctor if you have concerns or questions before use.



**DID YOU KNOW** 

Berberine comes from the barberry fruit.



### What We Tested, and What We Found

For this round, we focused on some of the most visible and popular berberine products on the U.S. market. Products were chosen based on consumer demand, online visibility, and brand reputation. Some promoted high milligram doses, others highlighted enhanced delivery systems, and still others bundled berberine with synergistic ingredients like cinnamon.

Our goal was straightforward: determine whether these products contain the berberine they claim.

We want to cut through the buzzwords: "liposomal", "phytosome", "high-dose," and verify what matters: actual berberine content. With poor label accuracy, even the strongest clinical data doesn't matter, because consumers aren't getting the intended active compound in the first place.

Each product was purchased anonymously, either through the brand's official Amazon storefront or their direct-to-consumer website. We avoid third-party sellers to minimize the risk of counterfeit or mishandled inventory. All purchases were logged, with lot numbers and full documentation, before being submitted for analysis. Testing was conducted by an ISO 17025–accredited third-party laboratory, and all supplements were tested twice for consistency, especially in cases where a product did not meet label claims on the first pass. It is important to note that results represent testing of specific product lots and may not be representative of all products from these manufacturers.

#### What We Looked For:

We focused on three core quality markers:

Berberine Per Serving (mg): The actual amount measured in each serving.

Percent of Label Claim (%): How much Berberine was present compared to what the label promised

**Heavy Metals (μg/serving):** Levels of lead, mercury, cadmium, and arsenic compared to California Prop 65 limits

A product passed if it contained **at least 95%** of its labeled Berberine dose



### So What Did We Find?

Six products passed, with <u>Nature's Bounty</u>, <u>HUM</u> and <u>Designs for Health</u> even exceeding their label claims slightly. The 6 brands that passed are examples of the industry at its best: delivering reliably dosed products that consumers can trust.

But the 7 failures tell a different story. Several products contained less than 10% of the labeled amount, and in the most extreme cases (Bvivloo Gummies, Vylarithonixa Gummies, and Caelum Core Liposomal), the actual berberine was effectively zero. The trend was especially clear among products advertising unusually high doses (1500-2000 mg) or novel delivery formats, which may have been more about marketing appeal than actual formulation quality.

This testing represents a snapshot of the berberine market and should not be interpreted as applying to all products from the tested manufacturers.

Product	Berberine Label (mg)	Berberine Actual (mg)	% of Label Claim	Testing Result*
Nature's Bounty: Berberine	1000	1245.20	125%	PASSED
HUM: Best of Berberine	1200	1283.46	107%	PASSED
Designs for Health: Berberine Synergy	400	417:10	104%	PASSED
Luma Nutrition: Berberine	1200	1169.76	98%	PASSED
Doctor Recommended Supplements: Berberine Plus	1200	1168.26	97%	PASSED
Toniiq: Ultra High Purity Berberine	500	475.52	95%	PASSED
Feel Good Superfoods: Berberine Phytosome	475	190.24	40%	FAILED
Nutriflair: Berberine Plus Ceylon Cinnamon	1200	91.22	8%	FAILED
Nutrivein: Berberine with Ceylon Cinnamon	1200	19.16	2%	FAILED
KoNefancy: Berberine HCL	1500	19.94	1%	FAILED
Caelum Core: Liposomal Berberine	1500	9.29	1%	FAILED
Bvivloo: Berberine Gummies	2000	None Detected	0%	FAILED
Vylarithonixa: Berberine Gummies	2000	None Detected	0%	FAILED

<sup>\*</sup>These results represent testing of specific product lots and may not be representative of all products from these manufacturers.





## Key Takeaways

#### **Key Takeaways**

- 6 Products Passed, demonstrating solid manufacturing standards
- 7 Products Failed, with several showing catastrophic underdosing (< 2%)</p>
- 3 "Enhanced delivery" products were more likely to FAIL
- 4 Higher label doses (≥1500 mg) correlated with worse outcomes
- 5 Both tested gummies FAILED with 0% Berberine

While the products in this report are listed by their percentage of label claim, that ranking should not be viewed as a hierarchy of "better" or "worse." **Our standard is simple:** a product either meets the threshold and passes, or it falls short and fails. Beyond that, we don't distinguish levels of performance. For a more complete view of a brand's overall quality and reliability, we recommend looking at each product's **TrustScore**, which captures a broader set of quality indicators.

When it comes to delivery formats, the results were eye-opening. In theory, liposomal and phytosome products should help solve berberine's well-known bioavailability problem by improving absorption. In practice, however, **many of these "enhanced" products contained dramatically less berberine than advertised,** sometimes effectively none. In a unique case, Feel Good Superfoods advertised Berberine in two forms: Berberine Phytosome (275 mg) and Berberine HCL (200 mg), insinuating 475 mg per serving. Our testing methods detect the total berberine content regardless of form.

This suggests that while a delivery technology may have scientific merit, its current marketplace execution is inconsistent, with some brands leaning heavily on buzzwords like "liposomal" to justify higher prices without actually delivering the ingredient in usable amounts. For consumers, it's a reminder that not all innovation claims translate into quality.

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## Dosage Claim Issues

When we compared the label claims of passing versus failing products, a clear pattern emerged:





This suggests that many failing brands may be using high dosage claims as a marketing tactic, presenting their supplements as a "better value" by advertising larger amounts of berberine per serving. The problem is that these claims don't hold up under lab testing. In reality, several of these high-dose products contained less than 2% of their stated berberine, and in some cases virtually none.

The irony is striking: consumers are drawn to oversized milligram numbers, assuming they're getting more potency for their money, when in fact those products were among the least reliable in delivering any usable berberine at all. Passing brands, on the other hand, typically listed moderate doses that aligned with clinical research and then delivered them with accuracy.

For consumers, this is a crucial reminder: bigger numbers on the label don't always mean better quality, sometimes, they mean the opposite.



## The "Too Good to Be True" Price Tag

One of the most striking differences in our analysis came down to price. On average, the products that passed testing were priced higher, about \$33 per bottle, while those that failed clustered lower, averaging around \$25 (25% cheaper). This gap suggests that bargain-priced berberine may come at a hidden cost: compromised quality.

For example, Designs for Health Berberine Synergy, a product that passed testing, retails for roughly \$52.99, reflecting a premium positioning backed by accurate dosing. In contrast, **KoNefancy Berberine HCL**, which failed and delivered just ~1% of its label claim, sells for \$24.99.

This doesn't mean all higher-priced supplements are guaranteed to be accurate, but the trend was clear, brands charging more often delivered what they promised, while lower-priced products were more likely to cut corners. For consumers, this highlights the importance of looking beyond the cheapest option and considering whether price may be a signal of investment in quality and manufacturing rigor.

Product	Price (One-Time Purchase)	Testing Result*				
Designs for Health: Berberine Synergy	\$52.99	PASSED				
HUM: Best of Berberine	\$34.99	PASSED				
Doctor Recommended Supplements: Berberine Plus	\$34.95	PASSED				
Luma Nutrition: Berberine	\$29.99	PASSED				
Toniiq: Ultra High Purity Berberine	\$27.74	PASSED				
Nature's Bounty: Berberine	\$19.98	PASSED				
AVERAGE PRICE FOR PASSING PRODUCTS: \$33.44						
Feel Good Superfoods: Berberine Phytosome	\$29.99	FAILED				
Nutrivein: Berberine with Ceylon Cinnamon	\$26.99	FAILED				
Nutriflair: Berberine Plus Ceylon Cinnamon	\$26.98	FAILED				
Caelum Core: Liposomal Berberine	\$24.99	FAILED				
KoNefancy: Berberine HCL	\$24.99	FAILED				
Vylarithonixa: Berberine Gummies	\$23.97	FAILED				
Bvivloo: Berberine Gummies	\$17.99	FAILED				
AVERAGE PRICE FOR FAILING PRODUCTS: \$25.12						

Note. All pricing data are sourced from JungleScout (junglescout.com) as of July, 2025

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## Multiple Highly Rated Amazon's Choice **Products Failed Testing**

At first glance, most of the berberine products we tested looked like safe bets. Nearly all of them carried the coveted "Amazon's Choice" badge (with the sole exception of Feel Good Superfoods), and the average rating across both passing and failing products was strong, 4.3 stars or higher. To the everyday shopper, these markers suggest reliability, popularity, and value.

But our testing tells a very different story. Several of the worst-performing supplements, products with less than 10% of their labeled berberine, and in some cases virtually none, still carried the "Amazon's Choice" badge and maintained thousands of positive reviews. For example, Nutrivein Berberine with Ceylon Cinnamon scored 4.3 stars despite delivering just 1.6% of its claimed dosage. Similarly, KoNefancy Berberine was both an Amazon's Choice product and a top seller, yet contained only ~1% of its label claim.

This highlights a crucial disconnect: Our testing suggests that e-commerce badges and ratings may not correlate with lab-verified ingredient accuracy. Shoppers may assume these signals equal trust, but in reality they can amplify products that are popular for marketing reasons while failing at the most important task: delivering what's on the label.

The takeaway is clear: neither Amazon's Choice nor high star ratings can substitute for thirdparty testing. For supplements, especially in hype-driven categories like berberine, true trust comes only from independent lab verification.









#### HUM **Best of Berberine**

**Testing Result:** 

Amazon Rating: 4.2/5 ★★★★

#### Toniia

Ultra High Purity Berberine

**Testing Result:** 

Amazon Rating:

4.4/5 ★★★★★

#### Nutrivein

Berberine with Ceylon Cinnamon

**Testing Result:** 

FAILED

Amazon Rating: 4.3/5 ★★★★★

#### **Nutriflair**

Berberine with Ceylon Cinnamon

**Testing Result:** 

FAILED

Amazon Rating:









## **Gummies: A Recurring Problem**

As we've seen in past testing rounds, gummies continue to underperform when it comes to delivering what's on the label. Both gummy products in this berberine category, Bvivloo Berberine Gummies and Vylarithonixa Berberine Gummies, failed testing, with both showing effectively no berberine at all.

This mirrors the same pattern we observed in our <u>Creatine testing</u>, where gummies consistently struggled to meet potency claims. The likely issue is twofold: technical challenges in formulating stable doses into a gummy matrix, and a market emphasis on convenience and flavor over manufacturing precision.

While we acknowledge that this is based on our limited testing sample, for consumers, the lesson is straightforward: gummies may be appealing, but they appear to be one of the least reliable delivery formats for accurate dosing. Until brands demonstrate consistent lab-verified results, capsules and powders remain the safer choice.

# Reviewing the Correlation Between TrustScore and Berberine Results

At SuppCo, our **TrustScore** system provides consumers with a 10-point rating based on 29 quality attributes, including manufacturing standards, third-party certifications, product transparency, and brand accountability. While TrustScore does not measure biochemical content directly, our testing across multiple categories has shown that it often correlates strongly with actual product quality.

Berberine reinforced this pattern.

Products that PASSED had higher TrustScores, averaging

Products that FAILED had significantly lower TrustScores, averaging

7.27

5.49

This gap shows that TrustScore can be a useful predictor: higher-scoring brands are more likely to deliver on their label claims, while lower-scoring brands often cut corners or lean on marketing rather than quality manufacturing.



### Reviewing the Correlation Between TrustScore and Berberine Results

Product	TrustScore	Testing Result*
HUM: Best of Berberine	9.25	PASSED
Designs for Health: Berberine Synergy	9.00	PASSED
Toniiq: Ultra High Purity Berberine	8.13	PASSED
Luma Nutrition: Berberine	5.88	PASSED
Doctor Recommended Supplements: Berberine Plus	5.69	PASSED
Nature's Bounty: Berberine	5.69	PASSED
Nutrivein: Berberine with Ceylon Cinnamon	6.13	FAILED
Nutriflair: Berberine Plus Ceylon Cinnamon	6.00	FAILED
Feel Good Superfoods: Berberine Phytosome	5.81	FAILED
Caelum Core: Liposomal Berberine	5.69	FAILED
KoNefancy: Berberine HCL	5.19	FAILED
Vylarithonixa: Berberine Gummies	5.13	FAILED
Bvivloo: Berberine Gummies	4.56	FAILED

It is worth underscoring a key observation we've seen across all categories tested to date: products scoring 8.0 or higher have consistently passed SuppCo Tested analysis. In the berberine category, HUM (9.25), Designs for Health (9.0), and Toniiq (8.13) all cleared this threshold and passed testing. Conversely, none of the failing products crossed that bar.

Still, there are nuances. Some passing products, like Luma Nutrition (5.88) and Doctor Recommended Supplements (5.69), had lower TrustScores but nonetheless delivered accurate dosing.

For consumers, the takeaway is clear: starting with products that score 8 or above on TrustScore dramatically increases your chances of getting what's actually on the label. Independent testing confirms it.



### Where We Go From Here

When we launched SuppCo Tested, we didn't know how far it would reach. But since our first Creatine report and the follow-up on NAD<sup>+</sup>, the response has been overwhelming.

Those two reports alone have been viewed by thousands of consumers, sparked discussion across Reddit, TikTok, and the functional medicine space, and have directly influenced how supplements are bought, sold, and formulated. In just the past year, SuppCo has grown from a product ratings platform to a trusted authority in supplement integrity, and these reports are a part of the reason why.

And the ripple effects are real.

Several SKUs have been pulled from major retailers after failing SuppCo Tested evaluations.

Multiple companies have reformulated products or updated labels following our findings to meet label claims and lower contaminant levels.

Brands are reaching out to be included in our testing, and while we don't accept testing requests (to maintain our independence), we appreciate the validation and growing respect for this work.

SuppCo charts and test tables are now showing up in Amazon customer reviews, as users cite our reports to call out poor-performing products directly on the product pages themselves.

It's clear: SuppCo Tested is making waves in the supplement industry.

We didn't create this program to attack brands, we created it to raise the bar. And that's exactly what's happening. As transparency improves, consumers get safer, more effective products, and the companies doing things right finally get the recognition they deserve.

The road ahead is long. There are still categories filled with misinformation, inflated claims, and inconsistent quality. But with every new ingredient we test, and every consumer we help make a smarter decision, we're one step closer to a supplement market built on data, not deception.

We're already deep into our next batch of testing.

Stay tuned.

Jordan Glenn, PhD SuppCo Head of Science





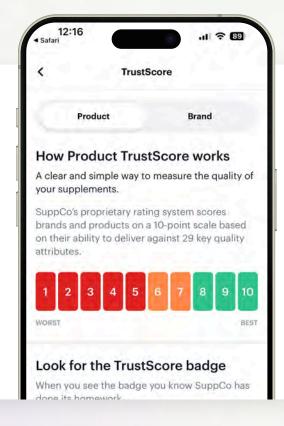
### Let's Make Sense of Supplements

If you found this report helpful, there's a lot more waiting for you inside the SuppCo app. From TrustScores for over 20k rated products that you can search by nutrient, to a personalized analysis of your stack, to Expert Protocols from Dr. Mark Hyman, Dr. Robin Berzin and more, SuppCo is designed to help you make smarter, more confident health decisions.

**Did you know?** SuppCo just launched Pro, our premium subscription opportunity. SuppCo Pro gives users more tools and deeper personalization than ever to help them optimize their supplement stack. We're launching tools to create your own personalized supplement plan, and to optimize your product quality, as well as special Pro user perks and access.

Personalized nutrient plan Product quality optimization Priority TrustScore requests Unlimited stack analyses

Whether you're just getting started with your stack or want to explore other supplements that fit your goals, the SuppCo app gives you science-backed guidance without the hype. It's free to explore and packed with tools to help you cut through the noise. <a href="Download the SuppCo app">Download the SuppCo app</a> to get started.



SuppCo is free and packed with tools to help you cut through the noise.

Download the App









## Appendix: Heavy Metals Screening

When assessing supplement quality, it's not enough to ask if the active ingredient is there, we also ask what else might be in the capsule. That's why every SuppCo Tested evaluation includes heavy metals analysis.

We screened all berberine products for **lead, arsenic, cadmium, and mercury,** referencing California's **Prop 65 limits,** some of the strictest in the world. These thresholds are designed to protect against long-term, cumulative exposure:

**Lead:** 0.5 μg/day **Arsenic:** 10 μg/day **Cadmium:** 4.1 μg/day **Mercury:** 0.3 μg/day

#### Results

None of the products exceeded Prop 65 limits. A few showed measurable traces of lead or cadmium, but when converted to per-serving micrograms, the amounts were far below safety cutoffs, often just hundredths of a microgram.

#### **Takeaway**

In practical terms, you could take these products every day without meaningfully increasing your heavy metal burden.

For daily-use supplements like berberine, this is reassuring: **the problem isn't contamination**, **it's potency**. Consumers can take these products without meaningfully increasing heavy metal burden, but they may not be getting the berberine dose promised on the label.