

# C4 Ultimate: Cellucor's Pinnacle Pre Workout!

written by Mike Roberto | December 13, 2016



C4 Ultimate represents the ultimate pre workout experience from industry heavyweight Cellucor that features a mostly transparent label and well-dosed ergogenics.

For years, customers have asked for it, and now it's finally here. A *decked out* version of Cellucor's C4 pre workout... with some *serious* ingredient doses.

The rumor mill has been ablaze with whispers of a brand new version of **Cellucor's** best selling pre-workout supplement, C4. The new version was promised to be more transparent and full-dosed, and for the most part, it is.

Today, we're delving into **Cellucor C4 Ultimate**, a pre workout that hits just about all the right notes on the energy, focus, performance, pump, and endurance scale.

The breakdown is just ahead, but first, take a moment to check the best deal and sign up for alerts from PricePLOW:

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## Team PricePLOW's C4 Ultimate Review

We got an early test of it, and it lived up to *all* expectations!

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### C4 Ultimate Ingredients

C4 Ultimate is a tale of two labels, the ergogenics are transparently dosed while the energy and focus blend is proprietary. However, it's the energy blend where things are the most intriguing as it borrows pieces from Cellucor's focus-heavy pre workout C4 Neuro.

- **Citrulline Malate (6g)**



	Amount Per Serving	% DV
Calories	5	
Total Carbohydrate	1g	<1%**
Vitamin C (as Ascorbic Acid)	250mg	417%
Niacin (as Niacinamide)	60mg	300%
Vitamin B6 (as Pyridoxal-5-Phosphate)	1mg	50%
Folic Acid	500mcg	125%
Vitamin B12 (as Methylcobalamin)	70mcg	1167%
Calcium (as Calcium Silicate)	45mg	9%
Citrulline Malate	6g	†
CarnoSyn® Beta-Alanine	3.2g	†
Creatine Nitrate (N03-T®)	1.5g	†
Betaine Anhydrous	1.5g	†
Nitrosigine® Inositol-Stabilized Arginine Silicate	1.5g	†
Arginine Alpha Ketooglutarate	1g	†
Taurine	1g	†
C4® Ultimate Energy & Focus Blend	858mg	†
<small>N-Acetyl-L-Tyrosine, Caffeine Anhydrous (300mg), Velvet Bean (Mucuna pruriens) seed extract (standardized for L-Dopa), Theacrine (as TeaCrine®), AlphaSite® A-GPC (Alpha-Glycerol Phosphoryl Choline), Zembrin® (Sceletium tortuosum) aerial parts extract, Rauwolfia vomitoria root bark extract, Huperzine A (from Toothed Clubmoss (Huperzia serrata) aerial parts extract)</small>		

\*\*Percent Daily Values (% DV) are based on a 2,000 calorie diet.  
† Daily Value not established.  
Other Ingredients: Polydextrose, Silicon Dioxide, Natural & Artificial Flavors, Calcium Silicate, Sucralose, Acesulfame Potassium, Malic Acid, Citric Acid, FD&C Red #40.

C4 Ultimate is the most robust and decked out version of C4 yet feature several extremely well dosed ergogenics.

C4 Ultimate isn't screwing around as they start off with a hefty 6g dose of citrulline malate. A combination of L-Citrulline and Malic Acid, citrulline malate is an incredibly powerful nitric oxide (N.O.) booster that is vastly superior to L-Arginine due to its enhanced bioavailability in the body.[1]

Citrulline Malate increases circulation, vasodilation, and most important of all PUMPS! Furthermore, increased circulation means more blood and nutrients are supplied to your muscles enabling them to function at greater output throughout your workouts. Lastly, Citrulline Malate also supports ATP production, helping you to perform more work and speed intra set

recovery.[2,3,4]

- **CarnoSyn Beta Alanine (3.2g)**

Much like all previous iterations of C4, C4 Ultimate contains the all-time endurance booster, beta alanine. BA helps increase serum carnosine levels in the body which ramps up the body's ability to buffer lactic acid and help offset the "burn" that sets in during extended working sets.[5]

Beta alanine's buffering ability leads to better endurance, greater power, strength, and less fatigue.[6,7,8]

As you've likely noticed, you'll get the *full* clinically-studied dose of 3.2g if you full scoop. So watch out though if you do go full-bore with that scoop – you might be in store for a serious case of tingles! Most C4 fans are used to this and rather enjoy it, but C4 Ultimate's tingles may take it to the next level!

- **Creatine Nitrate N03-T (1.5g)**



Cellucor / Nutrabolt is legally licensing this ingredient from ThermoLife International

N03-T is the ThermoLife-patented version of creatine nitrate. Each gram contains 67.5% creatine and 32.5% nitrate, meaning you'll get 1012mg of creatine in each serving of C4 Ultimate. This won't meet your daily 3-5g of creatine, but that's not why it's here.

We're more interested in the **487.5mg of nitrate** which helps sustain the nitric oxide boost we got at the start with Citrulline Malate. Nitrates will help improve blood flow, endurance, power, and most importantly pumps![9,10,11]

This is a great dose, and it will last a very long time. Cellucor's always had creatine nitrate in their products, but we don't think it was ever *this much*.

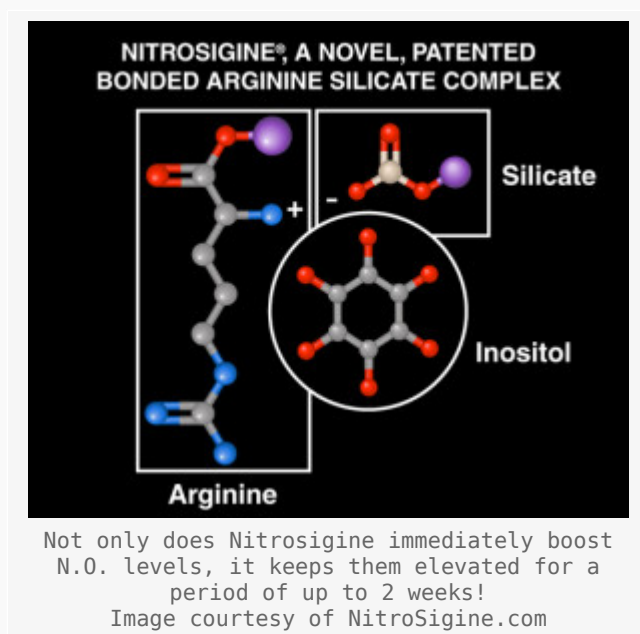
- **Betaine Anhydrous (1.5g)**

The next ergogenic contained in C4 Ultimate is the power and strength booster Betaine Anhydrous. You'll also see it displayed sometimes as trimethylglycine or TMG for short. Betaine is a muscle building compound derived from sugar beets.

Betaine significantly increases in strength, power, and endurance, while also alleviating soreness – but unfortunately we can only make those claims at 2.5g, not 1.5g.[12,13,14] There will still be benefits, but if you want to replicate what's in the 2.5g studies, you'd have to add another gram.

One last benefit of betaine is that it synergizes with creatine to enhance the body's natural synthesis of the powerful ergogenic.[15]

- **Nitrosigine (1.5g)**



Two well-dosed pump ingredients weren't enough – there's more!

Nitrosigine is a novel form of the age old N.O. booster, arginine, developed by Nutrition21. **This new-age arginine is bonded to silicate** to increase its bioavailability.

The landmark 2014 study using the ingredient noted nitric oxide levels were immediately boosted after taking it. But what's really incredible is that Nitrosigine increased **baseline nitric oxide levels**, meaning it keeps N.O. levels elevated for a period of up to two weeks and could potentially lead to further long term benefits.[16]

- **Arginine Alpha Ketoglutarate (1g)**

Not done with the pumps yet!

For a long time, Arginine AKG (AAKG) was a primetime pump ingredient in many pre workouts, but it has fallen by the wayside in favor of other more effective pump inducers like Citrulline and Nitrosigine.

You're probably wondering why it's included in C4 Ultimate then? Well, as it turns out, **arginine synergizes with nitrates to reduce nitrate tolerance.**[17] This means your body won't get "used" to the effects of nitrates and feel the need to constantly up the dosed, as many do with caffeine.

- **Taurine (1g)**



Cellucor has sent out some "tester" packets to some of their insiders for advanced testing and to get early feedback on the ultimate C4! Subscribe to our [YouTube channel](#) to see our impressions!

Taurine is a conditionally essential amino acid that functions as a cell volumizer in skeletal muscle which supports muscle fullness, endurance, and "water-based" pumps.[18]

It's also worth mentioning that Taurine is found in rather large amounts in the brain. In addition to improving performance, taurine also enhances mental focus and cognition.[19]

In order to get the benefits of the water-based pump, it's important to *drink* a lot of water with C4 Ultimate and especially when training. That's of course where Alpha Amino comes in – this is Cellucor's intra workout supplement that can be used as an "advanced sports drink".

- **Ultimate Energy & Focus Blend (858mg)**

Now begins our proprietary blend, but we *do* know how much caffeine's in here, so that helps us:

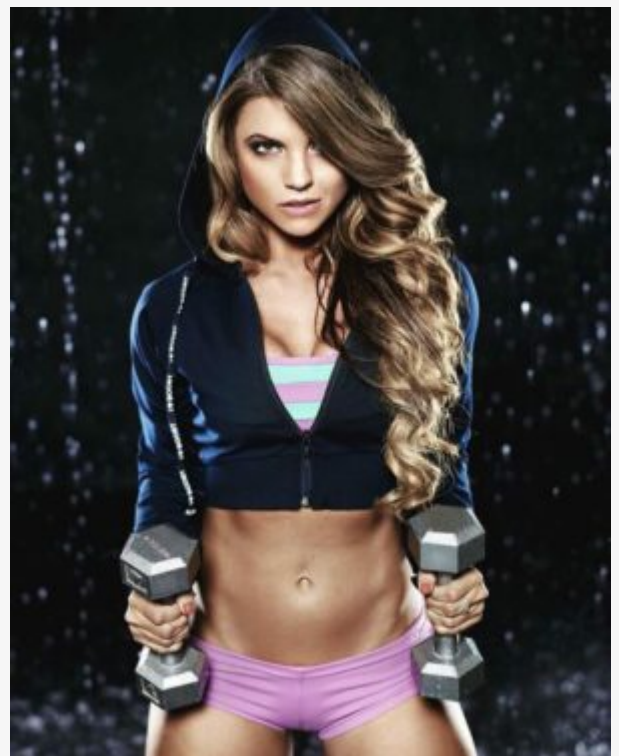
- **N-Acetyl Tyrosine**

N-Acetyl L-Tyrosine (NALT) is the main focus booster in most other C4 iterations, but here, it's only part of the much more comprehensive focus blend. NALT is a more bioavailable form of the amino acid L-Tyrosine, and in line with that, it's generally regarded as the best absorbed form.[20]

Studies using tyrosine note that it can improve mental focus this by increasing the production of noradrenaline and dopamine in the body, two big time neurotransmitters.[21,22] Additionally, NALT also supports healthy overall mood while reducing stress.[23,24]

Since this is before 300mg caffeine in the proprietary blend, we know that it has at least 300mg as well.

- **Caffeine (300mg)**



Cellucor athlete Jen Jewell always goes to the Ultimate length to make the most of her workouts and appearance.

**No more two scooping your C4!!!**

Did we mention C4 Ultimate isn't messing around? If you didn't believe that already, then how does **300mg per scoop** sound?

Caffeine is a tried and true stimulant that just about everyone is familiar with and feels reasonably safe consuming. It's great for all things energy, but also focus, mood, alertness, and performance. 300mg is on the upper end of our preferred caffeine range, but should make for some rather amped up sessions at the gym!

- **Velvet Bean Extract**

Velvet bean extract is typically standardized for L-Dopa, and C4 Ultimate's Velvet bean is no exception. L-Dopa is a precursor to dopamine and when supplemented stimulates dopamine production in the body. This helps reduce stress and significantly improve mood[25], which ultimately helps concentration and mental performance.

It's also worth mentioning that this ingredient helps boost growth hormone levels, decrease cortisol, and optimize testosterone levels.[26,27]

- **TeaCrine**

**TeaCrine** is a patented form of *theacrine*, an alkaloid naturally synthesized from caffeine in certain plants, such as the Kucha plant.[28]

Theacrine provides long-lasting energy and makes caffeine feel "like the first time." [29] Studies using theacrine note it prevents tolerance buildup to caffeine helping to promote a longer-lasting, smoother energy with lower doses of caffeine.[30]

You can read more about this in our article titled *Theacrine: Caffeine's Long-Lasting Counterpart*

- **AlphaSize Alpha GPC**



Alpha GPC is one of the most potent and effectively absorbed forms of choline supplements around. If citicoline isn't in a pre workout, this is the form we want!

Studies on Alpha GPC document increased mood and focus, and most importantly "mind muscle connection." Alpha GPC works its magic by enhancing production of the "learning neurotransmitter" acetylcholine.[31]

Additionally, Alpha GPC has also been documented to improve endurance, power, and post-workout Growth Hormone (GH) levels.[32,33,34]

In terms of Alpha-GPC increasing strength, however, a very large (and expensive) dose of 600mg is what was found to be successful so far in research. Researchers are currently working on lower doses to see if those gains are replicated, so stay tuned to PricePLOW to learn about that.

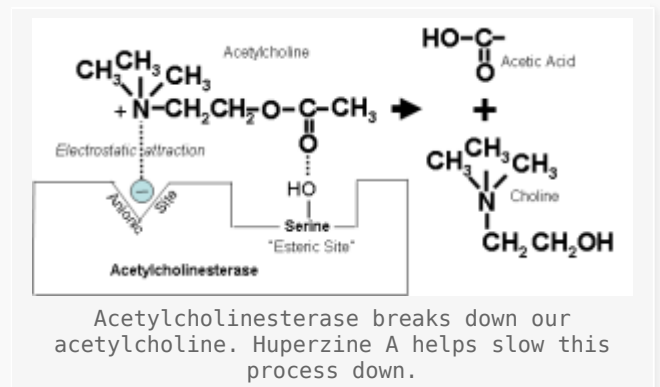
**Note:** The Alpha-GPC here is at 50% 'strength' (it's often bound to silica so that it makes a nice powder). It's not disclosed if this ingredient is actual Alpha GPC or 50% Alpha GPC (thus making it half the unlisted dose). Confirm with the manufacturer if concerned, and we will update this post if there is clarification.

- **Zembrin**

Zembrin is the trademarked form of *Sceletium tortuosum*, an herb also known as Kanna. Clinical studies using Zembrin show that it can improve mental performance and heighten overall cognitive function.[35,36]

Furthermore, there are reports that it may positively impact overall mood and well-being by reducing stress and anxiety.[37] This is one ingredient you'll definitely "feel," and we believe there is something to the mood boost study cited above.

- **Rauwolfia Vomitoria**



Rauwolfia vomitoria is a species in the plant family of Rauwolfia that's traditionally used in African medicine as a remedy for potential mental disorders due to its mood-enhancing abilities!

Modern research notes Rauwolfia aids in lowering body weight[38] and decreasing pain sensitivity, while also possibly treating assorted mental diseases.[39]



- **Huperzine A**

The final ingredient in this all-encompassing pre workout is another powerhouse nootropic, Huperzine A, a.k.a. Toothed Clubmoss Extract.

Rather than directly increase production of acetylcholine, like Alpha GPC, Huperzine A prevents its breakdown.

Huperzine inhibits acetylcholinesterase, the enzyme directly responsible for acetylcholine's breakdown.[40] This means that Huperzine indirectly increases amounts of this all-too-important neurotransmitter by helping it "hang around" longer, and ultimately "indirectly" increasing acetylcholine levels.

## Flavors Available



After you get amped for your workout with C4 Ultimate, power through your workout with the revamped Alpha Amino. Click the image to read more!

C4 Ultimate currently comes in 20 and 40 servings tubs with four flavors to choose from:

- **Icy Blue Razz**
- **Cherry Limeade**
- **Orange Mango**
- **Strawberry Watermelon**

C4 Ultimate is starting as a GNC exclusive product, but you can sign up for

price drop alerts below and PricePLOW will notify you when there's lower prices and new flavors out!

## Takeaway

The biggest complaint with the main C4 pre workout is that experienced users would need two scoops, and it just wasn't keeping up with the competition. *No more!*

Cellucor has released their fair share of C4 incarnations over the years, but none of them hit all the notes like this one does! C4 Ultimate truly is the ultimate form of one of the most popular workouts on the market and should be met with positive reviews from the fans out there, especially those who love the brand but were starting to venture away for the big lift days.

Now, if we could just get them to fully disclose the *entire* label... but we'll gladly take this!

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