

# Get Ready to FSU: Inspired Nutra's FSU Dyehard Stim-Free Pre is Here!

written by Mike Roberto | October 5, 2021

In fall of 2019, *Chris Waldrum* of **Inspired Nutraceuticals** introduced the world to a *potent* stimulant-free pre workout named **FSU**. It focused on nitrate-driven nitric oxide pumps, but *also* had a ton of hydration components involved that simply lit everyone up.

FSU blew the doors down, but Inspired knew they could do one better. In 2021, they not only introduced everyone to their latest stimulant-based pre workout in *DVST8 Global*, they're pairing it with a new version of its stim-free counterpart: **FSU DYE HARD**.



## FSU DYE HARD: Premium 3D Pump Potentiator

As you can tell with the *3D* in the bottle's subheading, this one has the patented new 3DPUMP Breakthrough combination of citrulline, glycerol, and Amla fruit extract – but Inspired kept the nitrates and hydration components as well.

If you're a fan of betaine and the "swole" cell volumization benefits you can get from it, you're going to love this one – not only do we have a 2.5 gram clinical dose of the muscle-building agent in two scoops, we *also* have a switch to betaine nitrate as well. Paired with 3D PUMP's glycerol and the electrolytes inside, this is an incredibly unique, feel-good pump experience.

Just make sure you drink enough water with it! The details are below, but before we get ready to FSU, check out PricePLOW's coupons, prices, and Inspired Nutraceuticals news alerts:

# Inspired Nutraceuticals FSU Dyehard Premium – Deals and Price Drop Alerts

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## FSU Dyehard Ingredients

Get ready to FSU – doses below are listed in *two* scoop servings:

- **3D PUMP Breakthrough (L-Citrulline (Vegan Fermented), Glycerol, Amla (Emblca officinalis) Fruit Extract) – 6000 mg**

The industry's newest pump ingredient, **3D PUMP Breakthrough** is a patented *blend* of three fantastic components with the following doses:[1]

	Amount Per 1 Serving %DV*	Amount Per 2 Serving %DV*
Vitamin C	150 mg 167%	300 mg 334%
Niacin	10 mg 63%	20 mg 126%
Folate	200 mcg DFE 50%	400 mcg DFE 100%
Vitamin B12 (as Methylcobalamin)	50 mcg 2083%	100 mcg 4166%
Chloride	89 mg 4%	178 mg 8%
Sodium	90 mg 4%	180 mg 8%

DYE HARD OR...DON'T	
3D PUMP Breakthrough™ (L-Citrulline (Vegan Fermented), Glycerol, Amla (Emblca officinalis) Fruit Extract)	3000 mg † 6000 mg †
Betaine Anhydrous	1250 mg † 2500 mg †
Betaine Nitrate (NO3-T*)	1000 mg † 2000 mg †
Sodium Glycerophosphate (NutriGP®)	250 mg † 500 mg †
Potassium Glycerophosphate (NutriGP®)	250 mg † 500 mg †
Pink Himalayan Rock Salt	150 mg † 300 mg †
Pine Bark Extract (Pinus pinaster) (Bark) (std. to 95% Proanthocyanidins)	150 mg † 300 mg †

† Daily Value (DV) not established

**40 SERVINGS, VEGAN, NO WADA BANNED SUBSTANCES.**

The FSU Dyehard Ingredients will work *far* better if you take it with plenty of water, so drink up!

- **3 grams of vegan fermented *L-citrulline***
- **1.2 grams of *glycerol***, and
- **150 milligrams of *Amla* fruit extract**

This may sound familiar, because it's already in FSU Dyehard's stim-driven partner, **DVST8 Global**, which means that when you stack them, you're about to get your arms blown off! (See the *stacking* section below).

Let's recap the components of 3DPUMP Breakthrough, starting with *Amla* since it's the newest one:

### **Indian Gooseberry?! Meet Amla Fruit Extract!**

Scientifically known as *Phyllanthus emblica*, **Amla fruit** also has the fantastic name of *Indian Gooseberry*. The fruit has been called "*the ayurvedic wonder*"[2] because it's packed full of cardiovascular-enhancing antioxidants that can increase endothelial function and limit platelet aggregation.[3]

We don't have *athletic*-based research (save for what's in the patent's pilot study[1]), but ingredients that improve endothelial function generally improve blood flow and thus workout performance too.

Amla seems to be the secret weapon that bridges the gap with citrulline and glycerol, two of the more *known* entities in 3D PUMP:

### **L-Citrulline – The Standard in Nitric Oxide Boosting**

With two scoops of FSU Dyehard, you get a clinical dose of 3 grams[4] of L-Citrulline, which is the precursor for the amino acid *L-arginine* that then goes on to help your body generate more *nitric oxide*. [5] Taking citrulline has been shown to work better than L-arginine itself, [6-8] which is why you see it in nearly every pre workout nowadays, so we're happy it was included in 3D PUMP.

When we increase nitric oxide levels, we achieve *vasodilation* in our blood vessels, which means they widen and relax. This then gets us improved blood flow (and synergizes with the Amla above), giving us greater nutrient delivery, but more importantly... better *pumps!*

With this process, ATP production increases, and that can lead to greater work output (if you hit it hard enough) as well as better recovery. [9-11] Citrulline helps the body remove metabolic waste, and that can lower perceived exertion, reduce soreness, and ultimately improve endurance. [12] All great things to have in the gym.

One final note: while the pilot study used 150 milligrams of amla, 3DPUMP is confirmed to contain *165 milligrams amla*.

Now that blood flow is covered, 3D PUMP attacks the *hydration* angle:

## Hyperhydration with *glycerol*



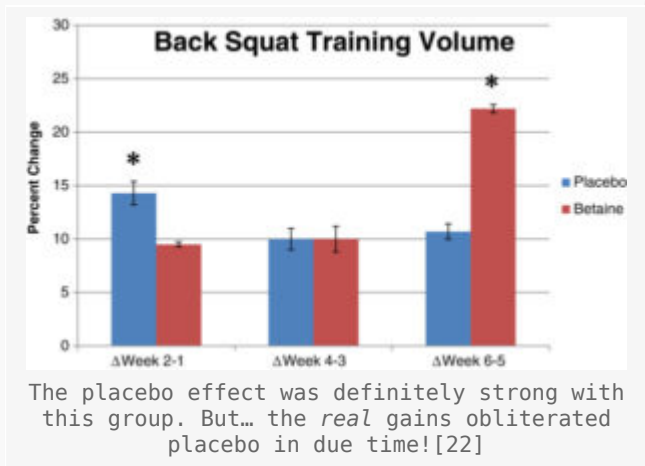
To pull in more water – and *keep* it inside – 3D PUMP uses the sugar alcohol known as **glycerol**, which boosts the body's total water volume and improves water retention when taken with enough fluids.[13] We call this “*hyperhydration*”,[14] and it can lead to improvements in endurance as well as better heat tolerance – again, when taken with enough water.[15-17]

Anytime you see glycerol on a label (or 3D PUMP for that matter), just realize that you're going to want to use plenty of water to get the best effects. Much of this is covered in our article titled *Glycerol: The Ultimate Guide for Hydration, Heat Protection, and Pumps*,[18] where you can learn more about the ingredient.

What 3D PUMP does uniquely here is to use *citrulline* as the carrier for glycerol – so there's no need to mix it with silica. Glycerol's carrier is actually an active ingredient – very smart!

- **Betaine Anhydrous – 2500 mg**

Get ready for a one-two **betaine** punch that's going to put us *well* over the clinical daily dose! In two scoops, FSU Dyehard starts with the “standard” 2.5 gram clinical dosage of this incredible muscle-building, power-inducing, hydrating osmolyte ingredient also known as *trimethylglycine (TMG)*.



In our article on *Inspired CR3* (Inspired Nutra's enhanced creatine capsule supplement), we explain that creatine is a phosphate donor. Betaine has some similar functions, but is instead a *methyl* donor, providing precious methyl groups that carry out *numerous* beneficial health functions, including homocysteine level reduction.[19]

As an osmolyte, betaine helps regulate fluid balance in and across cells,[20] and can help protect the the body from heat stress[21] while improving strength.[22,23]

There are several studies regarding *performance* improvement with betaine, and many of them use high doses,[24-29] but we have high doses here as well once we add in the betaine from our next ingredient.

In 2013, however, a couple of major studies were published showing *muscle gains* when taking 2.5 grams of betaine per day.[22,23] The researchers showed that with a training program, betaine use for six weeks led to 5.3 pounds of lean muscle mass and 6.4 pounds of fat reduction, for a total 3% downward body fat adjustment![22,23] The best part? The researchers saw improved *arm size* as well – which is awesome if you're planning to FSU.



Those same researchers later showed that the fat loss effects work in women too, at this same dose – 2.5 grams per day.[30]

We love this ingredient paired with glycerol, so that you get two osmolytes. Once again drink plenty of water, and get ready to add in even *more* of it:

- **Betaine Nitrate (N03-T) – 2000 mg**

Think you had enough betaine? Think again! Not only does Inspired Nutra go *beyond clinical* with the fantastic pump/strength/hydration agent, they blind it to a solid dosage of nitrate in the form of **betaine nitrate**. This doubles – actually *triples* – down on betaine, since we also have 2g betaine nitrate in DVST8 Global.

In our DVST8 Global post, we cited why Inspired shifted from arginine nitrate to betaine nitrate, and the same deal applies with FSU:

*We switched from N03-T Arginine Nitrate to N03-T Betaine Nitrate because betaine nitrates yield more nitrates per material than arginine nitrate.*

*– Inspired Nutraceuticals*

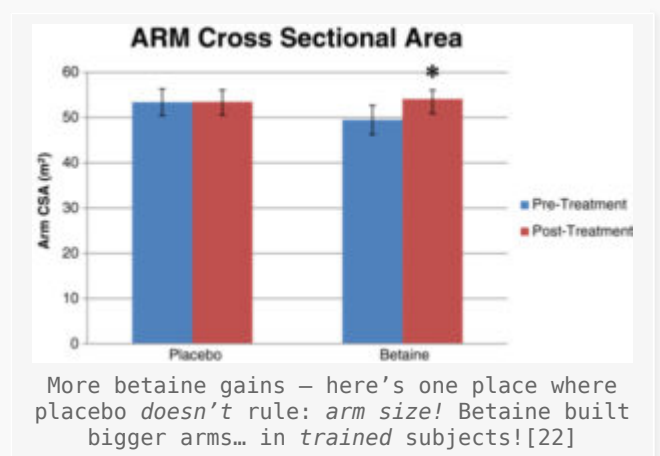
More nitrate, but as we know, we have *plenty* of betaine too, so this is a best-of-both-worlds situation.

## How nitrates boost nitric oxide levels

Nitrate (written as  $\text{NO}_3^-$ ) follows a unique and independent pathway that differs from the citrulline → arginine → NO synthase pathway. Instead, they get metabolized into *nitrite*, and enter the bloodstream from the intestines. In the *salivary* glands, we have a group of enzymes that then convert it to nitric oxide there![31-33] This is known as the **nitrate-nitrite-nitric oxide pathway**.

But even though the pathway is different, the end result and benefits of increased nitric oxide persist – better athletic performance and increased endurance thanks to improved blood flow.[34]

## The countless benefits of nitrates



Various studies have shown that well-dosed nitrate, like we have here, can improve numerous metrics:

- Better blood flow[35]
- Lower oxygen requirements for training[35-38]
- Improved strength (through increased force / power production)[39,40]
- NO increases[39,41]
- Increased endurance[37,38]
- Improved cellular energy[40-42]
- Better recovery[40-42]

The meta analysis cited above covers these benefits as well.[34]

Betaine nitrate is roughly 65% betaine, so we get an incredible 700 milligrams of nitrate here paired with another 1300 milligrams of betaine, meaning **FSU Dyehard has ~3.8 grams of total betaine in two scoops** – drink up with this one!

Since there are two grams of betaine nitrate in both DVST8 Global *and* FSU, we

have a section on stacking below this ingredient analysis. This is a *lot* of nitrate, and we don't suggest users take two scoops of both products simultaneously unless they really know what they're doing and are able to monitor blood pressure.

- **Sodium Glycerophosphate (NutriGP) – 500 mg**



Going beyond our osmolytes (betaine and glycerol) above, Inspired Nutraceuticals takes hydration to the next level with *three* electrolyte-based ingredients: **sodium glycerophosphate**, **potassium glycerophosphate**, and added **Pink Himalayan Rock Salt**.

First, let's talk about mineral glycerophosphates, and then get into the specifics.

### **Mineral glycerophosphates: glycerol, phosphate, and our minerals**

**Mineral Glycerophosphates** are mineral salts that provide bioavailable amounts of mineral content. Glycerophosphates are based upon *glycerophosphoric acid*, which is actually *glycerol 1-phosphate* – a glycerol monophosphate that's attached to a phosphate group.[43]

If you're uninterested in the chemistry lesson, the point is that we're binding our minerals to both *glycerol* and *phosphate*, two incredible components. We often neglect **phosphate**, which is one of the body's electrolytes, providing us with critical phosphorus and necessary for the production of ATP (adenosine *triphosphate*).[44]

These glycerophosphates can then be bound to minerals, and in this case, Inspired Nutra has chosen **sodium** and **potassium**. [45] Sodium glycerophosphate (NaGP) is about 19% sodium, and has been used successfully in pediatric parenteral nutrition solutions for hydration purposes.[46,47]



## The athletic benefits of sodium



FSU Dyehard Premium

At this point, most athletes know not to fear sodium, given its importance to performance and hydration. Sodium (and salt) is needed for muscular contractions[48] and should never be neglected by anyone who steps foot in a gym.[49]

If you're still not on the sodium/salt bandwagon, we implore you to read the paper titled "*The Importance of Salt in the Athlete's Diet*".[49]

- **Potassium Glycerophosphate (NutriGP) – 500 mg**

With **potassium glycerophosphate**, the same base research above still applies,[43,44] only now we have *potassium* bound in. It's blended with a bit of rice flour to enable stability, and is ultimately about 11% potassium content.

Potassium is the yin to sodium's yang, and while sodium always gets the most attention, we believe that potassium deserves more. The mineral is sometimes called a "*shortfall nutrient*" because many Americans are deficient and have issues getting enough of it in their diets.[50,51]

When we *do* get enough in, we can get cardiovascular health benefits, such as lowered blood pressure and lower heart disease risk.[50,52,53] It may also help with bone mineral density improvements and calcium retention.[54,55] There isn't a great deal of *athletic* research on it though, but given that so many are deficient we believe it's smart to add in when possible.

- **Pink Himalayan Rock Salt – 300 mg**

To improve both flavor *and* sodium status, Inspired adds a bit more **Pink Himalayan Rock Salt**, which will *mostly* contain sodium, but also have trace minerals as well. This will provide the added benefits described above,[48,49] and rounds out an *incredible* hydration and osmolyte matrix in FSU.

- **Pine Bark Extract (Pinus Pinaster) (Bark) (std. to 95% Proanthocyanidins) – 300 mg**



Last but certainly not least, we have a very large dosage of **pine bark extract**, also known as *Pinus Pinaster*. Normally we see 200 milligrams, but not with FSU – Chris Waldrum and team provide **300 milligrams** – *50% more than competing pump supplements*, putting this one way over the top!

Pine bark extracts are generally known for their powerful antioxidant profiles, especially its *polyphenolic monomers*, *phenolic acids*, and *proanthocyanidins*, which drive much of its antioxidant activity.[56]

A few studies have shown that various pine bark extracts can increase blood flow,[57-59] consistently showing improved nitric oxide levels. The extract works via free radical scavenging, but has *also* been shown to stimulate *eNOS*,[60] or *endothelial nitric oxide synthase*, a messenger enzyme that

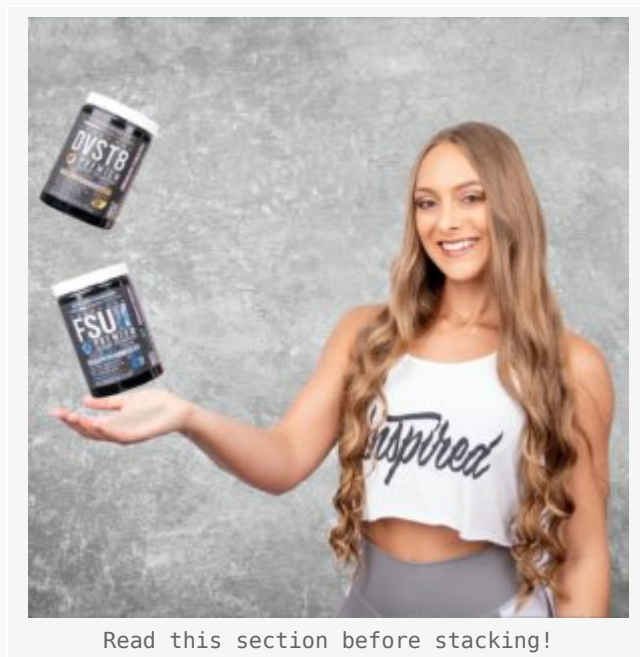
synthesizes nitric oxide. This means we have both direct and indirect effects from pine bark extracts, and a mechanism that's different from the above ingredients.

Again, Inspired included a powerful 300 milligrams if you two scoop it, so get ready to FSU!

## Flavors Available

Chris Waldrum and his team at Inspired Nutraceuticals do *not* mess around with flavors – it's been one of their strong spots since we first started covering them long ago:

## Stacking with DVST8 Global? Read this first (high doses of betaine nitrate!)



Before we get into the FSU ingredient label, we want to discuss stacking strategies with **DVST8 Global**. Between the two supplements, if you were to double-scoop *both* of them, you'd be getting *4 grams of betaine nitrate*, which is a very large dose. We're not yet sure of the "official" recommendations, but our general stance is to max out at around *3 grams total* unless you're monitoring blood pressure and know what you're doing.

This means, if stacking DVST8 Global in, we'd generally recommend a maximum *total* of three scoops across the two supplements, split however you prefer your stimulants from DVST8. We'll update this section if those suggestions change.

In addition, these ingredients should never be combined with ED drugs.[61]

## Time to FSU

Get ready to pound some water and pound some weight. Inspired Nutraceuticals put together a fantastic upgrade to their original FSU (which was already awesome), tripling down on betaine. The combination of nitrates, 3D PUMP, and plenty of hydration-boosting ingredients means that pumps are coming in from *all* angles.

Where Inspired really sneaks one in, however, is with a pine bark extract dose that's 50% greater than nearly everyone else's. If you're feeling a little something *extra* here, don't be surprised if it's that final boost down at the bottom of this formula.



A solid stack for those looking to chase some muscle gains is Inspired Nutra's CR3 creatine capsules, which will also add in some absorption-amplifying ingredients and make for an incredible stim-free stack if you're keeping the stims away.

As always, Inspired hits it hard in an effort to *fuel what Inspires you* and help you FSU.

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