



SPHERAMINO



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The global Amino Acids market size is anticipated to be valued at USD 35.4 billion by 2022 with the gargantuan sports nutrition sector expected to develop further still, attributable to the growing need to be healthier and look the part in the 21st century.

BCAA (Branched Chain Amino Acids) including Leucine products are mega bucks right now, they are a growing super trend in the sports nutrition sector and every brand should have one. BCAA's are also a cornerstone ingredient; key for building muscle, maintaining tone, preventing muscular atrophy and fighting mental fatigue, their application in products therefore is huge.

Glutamine has super versatility to its function, perfect in sports recovery formulas but also has a significant role in the general health sector; supportive of gut and immune function. The body needs glutamine for various ongoing physiological requirements like detoxification, tissue repair and synthesis of neurotransmitters, so it makes perfect sense to beadlet such a crucial ingredient for continual benefit over time.

Introducing SpherAMINO – A new, innovative and exciting delivery system that provides an additional injection of BCAA's, Leucine or Glutamine after consumption. Does your product need to fuel gains, support muscle function or aid focus? SpherAMINO is whatever you need it be, available in various ratios of amino acids, in both sustained (SR) and delayed release (DR) formats.

SPHERAMINO

WHAT IS IT FOR?

Changing the face of sports nutrition, SpherAMINO will be the talk of the body building community for years to come. Fitness enthusiasts are constantly seeking new and exciting techniques to drip feed BCAA's over prolonged periods for the best recovery after training and the biggest gains possible.

SpherAMINO works perfectly in either pre, intra or post- workout formulas depending on product requirements.



LEAN MUSCLE

As BCAA's are critical to muscle function, they are central to maintaining a steady metabolic rate - the rate you burn calories, including fat. Athletes with superior muscle function give themselves the best chance of becoming lean and looking great.

BODY BUILDERS

Will aim to achieve approximately 2g protein/kg body weight daily to achieve desired gains. SpherAMINO can provide muscle vital BCAA's either in pre-workout format to fuel muscle in advance of training, support the immediate recovery via an intra-workout, or can be used in the post workout setting applied to proteins, all in one products and weight gainers.



HIIT TRAINING

One of the most physically demanding activities, the challenge here is to maintain muscle function to compete at the top of your game.

SpherAMINO works perfectly in an intra-workout product in this scenario. Alternatively, BCAA's can be taken as an essential part of the recovery – helping to alleviate DOMS (Delayed Onset of Muscle Soreness).

ENDURANCE

Not only are BCAA's recommended during the mid to latter stages of endurance sport to prevent excessive muscle breakdown, they are recommended to aid alertness. During prolonged exercise,

BCAA supplementation can help re-address a crucial amino acid imbalance in the brain – aiding focus when you need it most.

TEAM SPORTS

Which sport wouldn't benefit from maintaining muscle function during the whole course of the game whilst maintaining focus at key times during a whole match? SpherAMINO is a must for serious sports enthusiasts.

GENERAL HEALTH

With age, muscle mass declines. This leads to a reduced range of motion, a loss of mobility and an increase in chronic illness. SpherAMINO can be the perfect way to drip feed muscles with the nutrients they need to maintain long term health.



SPHERAMINO BRANCH CHAIN AMINO ACIDS

Containing the three proteinogenic BCAAs Leucine, Isoleucine and Valine which account for 35% of the essential amino acids in muscle proteins. Our beadlet technology provides a way of controlling when and how these active ingredients are released and adsorbed into the body.

BCAAs fill several metabolic and physiologic roles. Metabolically, BCAAs promote protein synthesis and turnover, signalling pathways, and metabolism of glucose. Physiologically, BCAAs take on roles in the immune system and in brain function.

We have the ability to modify the release of these active ingredients in order to change their release profile. There are three main profiles available, these are;

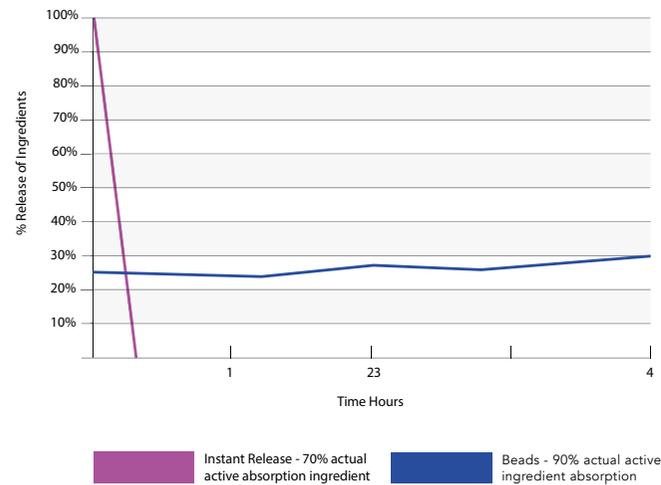
Sustained-release – A sustained release coating is designed to release an active ingredient at a predetermined rate in order to maintain a constant dosage concentration for a specific period of time.

Delayed-release – A controlled release coating delays the release of an active ingredient upon oral administration in order for it to release at a fixed location.

Anecdotal Results

By controlling either the rate of release and/or location, we are able to avoid the traditional instant release dump of ingredients. Studies show, that the body struggles to adsorb 100% of any active ingredient when presented in one instant dose.

By dosing in smaller quantities over a sustained period of time, the body will experience better therapeutic activity and adsorb a higher percentage of the active ingredient.



SPHERAMINO GLUTAMINE

Glutamine is one of the most important components of muscle protein, and helps repair and build muscle.

During intense training, Glutamine levels are greatly depleted in the body, which decreases strength, stamina and recovery. Our beadlet technology provides a way of controlling when and how Glutamine is released and adsorbed into the body, which allows us to reach the desired glutamine levels, pre, during and post workout.

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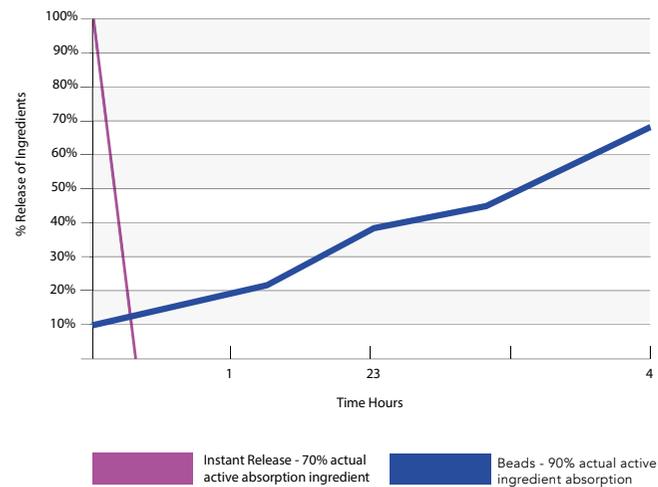
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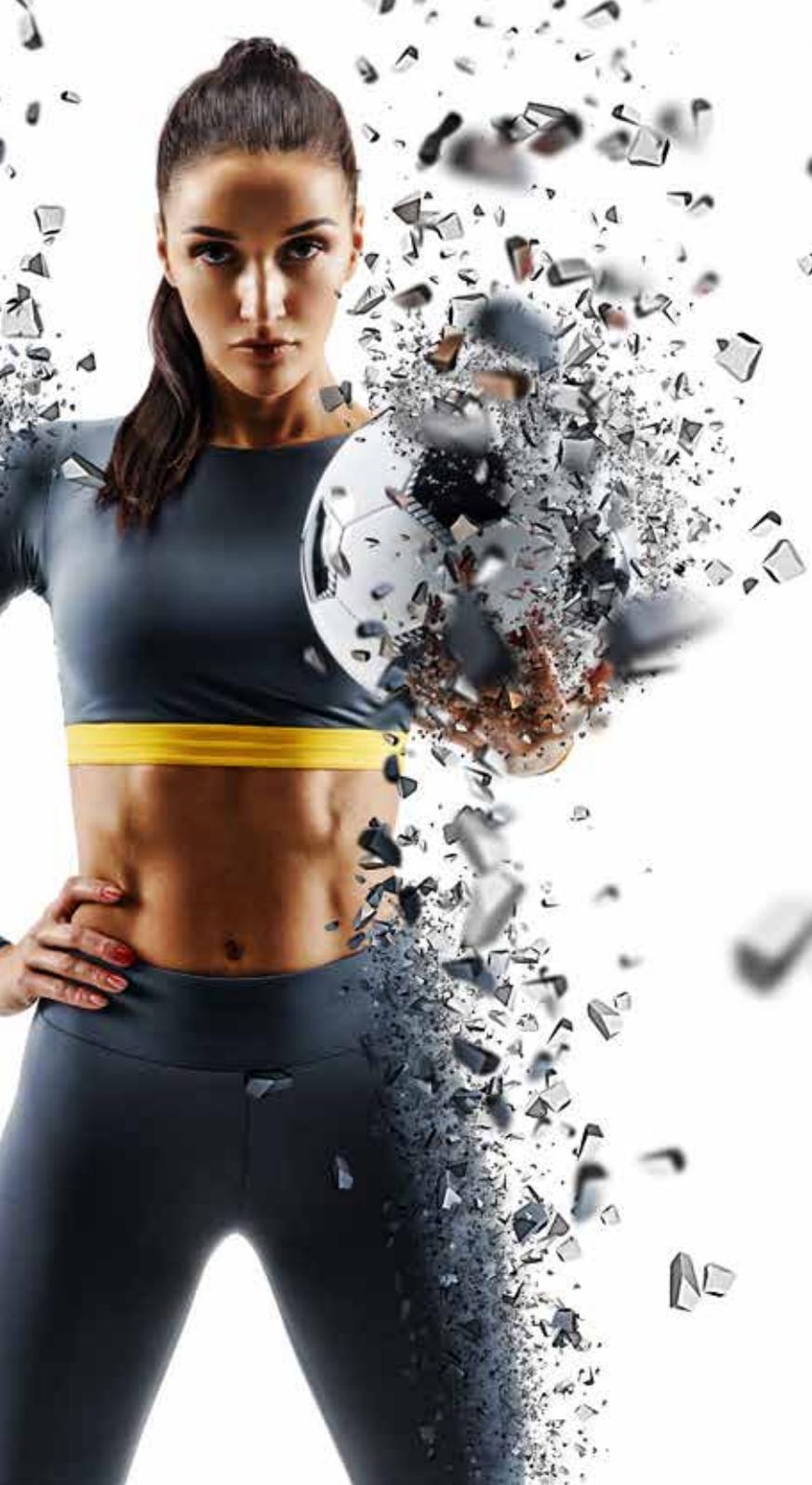
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SPHERAMINO LEUCINE

Leucine is the stimulating trigger for protein synthesis and hypertrophy. It is essential whether you want to build muscle or simply prevent muscle loss caused by ageing or prevent muscle loss when dieting. Our beadlet technology provides a way of controlling when and how Leucine is released and adsorbed into the body, which allows us to increase leucine levels, pre, during and post workout.

We have the ability to modify the release of these active ingredients in order to change their release profile. There are three main profiles available, these are;

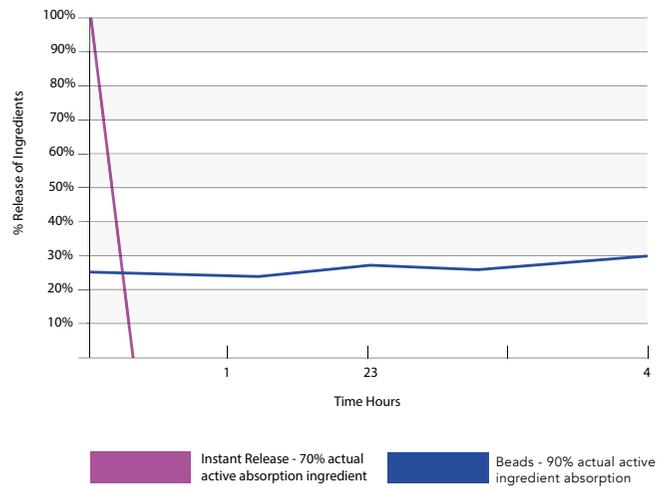
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TO DELAYED RELEASE

KEY BENEFITS

Delayed-release beads are typically enteric-coated to delay release of the active ingredient until the beadlet has passed through the stomach to prevent the active ingredient from being destroyed or inactivated by gastric juices or where it may irritate the gastric mucosa.

Pharmacokinetic studies have shown that when delayed release beads were given in equal total daily doses,

its bioavailability is approximately 10% higher than that of similar instant release comparisons.

By combining both instant release with delayed release solid dosage forms, we are able to create a 2 stage delivery method, meaning the end user gets two hits from a single dose.

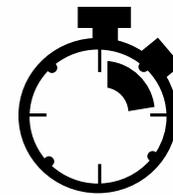
-
- Enteric Coated to protect active ingredient through gastrointestinal tract
 - 2 stage delivery method, when combining instant and delayed release solid dosage forms
 - Consumer to achieve two hits from single dose
 - Tasteless active ingredients
 - Premium consumer product offering
 - 10% higher bioavailability when compared to similar instant release comparisons



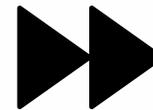
Increases energy*



Elevates mood*



Lasts 1 - 4 hours*



Starts working quickly



WHY BCAA'S FOR PERFORMANCE?

Optimal dosing according to the current literature: 8 grams of BCAA 2:1:1 immediately after resistance training; providing 4 grams of the highly anabolic leucine.

Theory: BCAA's are chiefly responsible for triggering the anabolic mechanisms which facilitate muscle growth following training; namely P13K, P70 and MTOR intracellular pathways.

BIOCHEMICAL BENEFITS OF DIETARY BCAA'S:

Muscle Protein Synthesis:

- Leucine specifically targets the mTOR pathway (mammalian target of rapamycin), the key regulator of muscle protein synthesis in skeletal muscle tissue whilst simultaneously inhibiting AMPK for maximum effect. Long term muscle growth relies on valine and isoleucine to support contractile muscle development.

Generation of HMB:

- BCAA's are thought to stimulate production of HMB (Hydroxymethylbutyrate), an amino acid particularly important for inhibiting muscle protein breakdown – particularly useful following training.

Exercise & BCAA's stimulate IGF-1 / Growth Hormone

- The effects of training and BCAA's work synergistically to upregulate IGF-1 (Insulin Growth Factor), a peptide that works at a hormonal level contributing increased muscle mass.

Prevention of Age Related Muscular Atrophy

- Research has shown that older individuals or those with metabolic disorders affecting the blood vessels (such as atherosclerosis, metabolic syndrome, diabetes) may require higher doses of leucine up to 6g to invoke the same anabolic response that might be seen when a young, fit athlete ingests 3g. This is because the amino acid transporters in the blood vessel lining become less receptive with age.

Improvement in Mental Clarity during Endurance Activity:

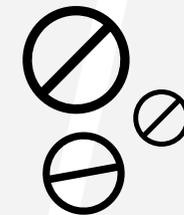
- Studies in human subjects have shown the plasma ratio of free tryptophan/BCAA's during endurance exercise to increase, leading to heightened amounts of 5-HT and serotonin crossing the blood brain barrier; neurotransmitters that contribute to feelings of lethargy. BCAA supplementation towards the mid to latter stages of endurance exercise are a great way to offset this ratio and stay focused.



Capsules



Powders



Tablets



Liquid



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