

PRESS RELEASE

SternVitamin assists manufacturers of foods for athletes and formula diets

Amino acid drinks for body building and body shaping

Ahrensburg, March 2013 – Proteins are essential for the growth and repair, proper functioning and structure of all living cells. It is estimated that the human body contains more than 50,000 proteins. All these proteins have just a few amino acids as their basic components. The amino acids have numerous functions, in particular the build-up of muscles. SternVitamin develops customized premixes for amino acid drinks specially geared to the needs of strength and endurance athletes, or which provide effective help with weight reduction diets.

Multifunctional components of all life

Proteins carry out their specific functions as hormones, as transport and storage molecules and as contraction elements in muscle tissue. They also play an important role as antibodies in the immune system, as coagulation factors in the blood and as structural and supporting substances in connective and bone tissue. Eight of the proteinogenic amino acids are indispensable for human health. These are lysine, methionine, threonine, isoleucine, valine, leucine, phenylalanine und tryptophan. Since the human organism cannot synthesize these protein components completely, they have to be taken in with the food or in the form of food supplements. SternVitamin offers a premix for a drink for athletes containing all eight essential amino acids plus vitamin B₆ to assist protein metabolism. The premix also contains the electrolytes sodium, potassium and magnesium which are lost through perspiration.

BCAAs: valuable partners for sport and dieting

“Another possibility is a special drink that helps even more specifically with muscle building and endurance sports,” says Annette Büter, an applications technologist with SternVitamin. “This drink contains the branched-chain amino acids leucine, isoleucine and valine – known as BCAAs. Unlike other amino acids, these are metabolized mainly in the muscles instead of the liver, which means they reach the place where they are needed faster and more completely. And they are also said to counteract physical and mental fatigue.”

Supplementation with BCAAs has also proved helpful with weight reduction diets, since leucine, isoleucine and valine account for about half of all the essential amino acids in

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food. During drastic reduction diets an adequate supply of these is no longer guaranteed. Since the human body has no appreciable means of storing essential amino acids it breaks down muscle mass if the supply is insufficient. As a result, fewer calories are burned and the energy balance and thus the success of the diet is impaired. A suitable extra supply of BCAAs helps to counteract this. What is more, scientists have found that a high dosage of these amino acids is associated with a low incidence of obesity. This means that suitable supplementation can help with a healthy slimming diet.

Customized combinations of active ingredients

Individual amino acids are now used for prevention in medicine and also in food supplements. Tryptophan, for example, has proved useful in cases of insomnia and for relaxation, while lysine and histidine strengthen the immune system. SternVitamin supplies all the usual amino acids and combines them with vitamins, minerals and trace elements, vitamin-like substances or plant extracts as requested by individual customers. "As a rule, every customer gets a tailor-made product", Annette Bütter explains. "We take a close look at the product parameters and the process by which the end product is made. That makes it possible to calculate any loss of effect caused by the manufacturing process or storage of the end products and compensate for it with suitable overdosing."

The raw materials themselves have to meet extremely stringent requirements, not only in respect of quality and availability, as Annette Bütter says: "We have found that amino acids, especially, are often too coarse in texture. If they are mixed with other, finer ingredients there is a risk they will separate out. So when we use new raw materials we always make sure they meet our requirements where grain size is concerned, too." If there are differences in grain size nevertheless, SternVitamin can compensate for them with the aid of the new fluid-bed processor. That ensures homogeneous premixes and prevents any separation. With the aid of fluid-bed technology it is also possible to convert powders which do not dissolve readily into agglomerates with a porous structure which have much better solubility in water. Further processes are drying, granulating and coating. The new plant is designed to meet the requirements of the EU GMP Guide and complements the counter-current container blending unit which is also qualified. The latter has been used since 2008 for extremely sensitive applications such as baby food and vitamin and mineral premixes. It is made of stainless steel throughout, housed in a completely separate and independent part of the factory and meets the most stringent hygiene requirements.

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About SternVitamin:

SternVitamin GmbH & Co. KG with its registered office in Ahrensburg is a member of the Stern-Wywiol Gruppe. For 33 years the group of companies has been among the successful enterprises operating internationally in the world of Food and Feed Ingredients. The eleven specialist firms that make up the Stern-Wywiol Gruppe produce a wide range of functional systems for food and animal nutrition. Besides SternVitamin for vitamin and mineral premixes, the dynamic group includes such well-known firms as Mühlenchemie for flour improvers; DeutscheBack for baking ingredients; Hydrosol for stabilizing systems; SternEnzym with enzymes for baking, sugar confectionery and the production of alcohol and beer; OlbrichtArom for food flavourings; HERZA Schokolade for functional chocolate pieces; Sternchemie for food lipids, in particular lecithin, MCT oil, red palm oil and spray-dried coconut milk. In the contract production of powdered foods and food supplements the Stern-Wywiol Gruppe operates under the trademark SternMaid. All the firms' activities revolve around applications research at the modern Technology Centre in Ahrensburg, near Hamburg, with an area of more than 3,000 m², where each of the specialist firms has access to the skills of the whole group through the Know-How Connection.

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