

MAP[®] – Master Amino Acid Pattern[®]



... a protein revolution

Eight essential amino acids for a protein diet
Dietary nutrient

MAP[®] is a pure foodstuff and has a 100% pure, free crystalline amino acid content.

MAP[®] is developed from pulses (GM-free; non-gene-modified) and does not contain any additives or doping substances. It is not a drug and does not have any contraindications.

MAP[®] provides an optimal ratio of the eight essential amino acids L-Leucine, L-Valine, L-Isoleucine, L-Lysine, L-Phenylalanine, L-Threonine, L-Methionine and L-Tryptophan for the human dietary pattern.

MAP[®] achieves 99 % Net Nitrogen Utilization [NNU*].

As a consequence, MAP[®] forms just 1% nitrogen toxins (ammonia, urea).

MAP[®] is almost completely calorie free (just 0.4 kcal in 10 pellets). It introduces the same amount of actually anabolic utilisable amino acids to the body as 350g meat, fish or poultry.

MAP[®] is completely reabsorbed in the small intestine within 23 minutes. It is already split and does not require any proteolytic enzymes. The transition period of usual nutritional proteins into the body takes 5 to 13 times longer.

MAP[®] does not leave behind any digestive end products.

* NNU = Net Nitrogen Utilization = Protein nutritional value

Can MAP[®] reduce excess weight or increase body mass without endangering health?

Yes, using MAP[®] for dietary nutrition as part of a diet – whether for weight reduction during competitions or to increase lean body mass – is a highly effective method in order to lose weight as quickly and healthily as possible. It can also be used to gain mass and density in conjunction with a corresponding higher dose and more intensive training. A 10 g dose of MAP[®] (ten pellets) provides the same amount of components for protein synthesis (99% Net Nitrogen Utilization) as 350 g meat, fish or poultry. It contains just 0.4 kcal. In comparison with vegetable food protein (soya and whey products), which produce a minimum of 84% nitrogen waste (ammonia, urea), MAP[®] produces just 1% of the toxic degradation products. Due to this the liver and kidneys will not be burdened. By taking MAP[®] as part of a diet or competition the sensation of hunger is reduced. This is because protein saturation is given priority by the organism. The result is that fat reduction and water balance are optimised along with the body weight. Skin and muscles are strengthened and tightened. Due to the absence of digestive end products the cardiovascular system is relieved, as are the digestive organs. This is a great advantage for sporting performance at the highest level or for people who are extremely overweight.

How long must MAP[®] be used before the first results become noticeable?

You will notice the first results relatively quickly depending on nutritional habits and the intensity of training. Through regular training you will notice an increase in muscle strength, muscular endurance and muscle density after a few weeks. However, muscle volume (mass) is only built up when you increase the training weights dynamically and progressively. In all other cases – e.g. when increasing the frequency of training with the weights at the same level or when increasing endurance performance – your muscles will be firmer (denser), rather than bigger. It is a similar situation with endurance performance. In this case a dynamic and progressive increase is also required in order to improve condition and constitution. The results you achieve with MAP[®] are enabled by a natural physiological process: i.e. through improved protein synthesis.

What is the recommended daily dose of MAP[®] if the product is taken as a supplement to food protein during a diet when preparing for competition?

Take 8 to 10 pellets as a replacement for lunch or your evening meal, if you want to reduce your body weight to a certain competition weight. The evening is preferable, as "slimming" is aided during the night when sleeping due to the increase in degradation processes. Naturally they should also be taken together with the necessary vitamins, mineral nutrients and trace elements. For this reason you should consume a daily minimum of 500 g of fresh fruit and vegetables and if necessary further nutritional supplements which are rich in vital substances. Please bear in mind the recommended minimum amount of essential sugar compared to extreme low carb diets. As part of the **dr. reinwald metabolic regulation[®]** as well as in our recommendations for sport nutrition, we place particular emphasis on a **balance of all vital substances**. The same applies

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to glyconutrients, which are essential for the maintenance of our brain. Although it makes up just 2% of the total body mass, our brain requires 20% of its energy through essential sugars. Omission of this nutrient supply leads to a reduction in memory performance and concentration problems. In severe cases – for example, through long periods of fasting or forced starvation diets to achieve a certain competition weight – it could even result in cerebral shrinking processes, i.e. a reduction in cerebral mass.

What is the recommended dose of MAP® for an athlete who would like to achieve optimal results in the shortest possible time?

Due to differences regarding sex, age, diet, intensity and frequency of physical activity as well as the individual abilities of building up muscle mass (hard gainer – easy gainer) the following doses are recommended:

Beginner:

5–10 pellets of MAP® as dietary nutrition together with the necessary vitamins, mineral nutrients and trace elements along with the required energy intake through essential sugars. It is recommended to take MAP® 30 minutes before training.

Advanced:

10 pellets of MAP® as a dietary nutritional supplement together with the aforementioned vital substances. It is recommended to take them 30 minutes before training.

After training, the minimum amount of time since the previous intake is 3 hours: 5 pellets of MAP® as dietary protein for a regeneration support, preferably together with the next meal, i.e. with the necessary vitamins, mineral nutrients and trace elements.

Top-level sport:

Professionals take 10 pellets of MAP® as a dietary nutritional supplement together with the aforementioned vital substances and 10 pellets 3–4 hours later. It is not possible to store amino acids in the body. So the amino acid reserves in the serum are used up after a maximum of 3 hours of physical activity. Up to 30 or more pellets per day are required for professionals depending on the type of sport and intensity. Please note that extreme endurance performance has a high protein requirement, not just pure muscle power. Adenosine Triphosphate (ATP), i.e. cell respiration, depends mainly on protein. Even a top-level body builder weighing 120 kg and with a corresponding training performance can completely substitute other food proteins, which burden the liver and kidneys with toxic metabolic waste. Therefore, he can feed on high protein in a healthy manner, i.e. without overloading on nitrogen toxins. This can be tested by means of the concentration of your urine (colour), when you eat meat or fish or when you take MAP®.

Why is MAP® not affected by any doping regulations?

MAP® has a 100% amino acid content, which is developed from pulses (GM-free).

MAP® is a 100% pure foodstuff, it is not a drug. That is why MAP® does not have any contraindications.

MAP® does not contain any additives or doping substances (tests available from the German Sport University Cologne).

How different are the values or metabolic burden of MAP® compared to other sport protein?

Please compare the graph from MAP® basic information.

Subsequent comparison assumes an anabolic protein yield of 9.9 g and is intended to show how much intake of each food protein must be eaten for it, what quantities of toxic degradation products were produced and how the organ load must be distinguished in relation to MAP®:

Origin	Food protein intake	NNU	Yield for cell build-up	Toxic nitrogen waste	Load ratio of food protein: MAP®
MAP®	10.0 g	> 99%	> 9.9 g	< 0.1 g	
Spirulina protein	55.0 g	18%	9.9 g	45.1 g	451 : 1
Soy protein	58.2 g	17%	9.9 g	48.3 g	483 : 1
Milk protein	61.9 g	16%	9.9 g	52.0 g	520 : 1

Example: Amount of nitrogen waste of soya in comparison with MAP = 483 : 1

Detoxifying organs are exposed to higher stress in cases of higher consumption of inferior protein from soya and dairy sources. This may result in metabolic impairment and damage to health.

For further interesting details about the most important component of sport nutrition read the information leaflet "Basic knowledge protein".

You can find more information about the uses of MAP® at www.map-protein.com – under "Downloads"

