

Product Information

– for professionals only –



**ZERO
TP enjoy¹⁰ GMP**

+ FIBRE

meta
INSTITUT FÜR DIÄTETIK
GmbH

In Short

- ZeroTP enjoy¹⁰ GMP is a Food for Special Medical Purposes (FSMP) for use in the dietary management of Tyrosinemia or Alkaptonuria
- suitable from 3 years of age
- concentrated protein supplement, based on Glycomacropeptide (GMP), containing a small amount of Phenylalanine and Tyrosine* – in powder form
- supplemented with indispensable and conditionally indispensable highly purified L-amino acids
- enriched with soluble fibre (polydextrose) – prebiotic effect
- with micronutrients
- contains small amounts of carbohydrate and fat
- tasty milkshake-like drink
- neutral in taste
- in convenient portion sachets at 10 g protein equivalent

* from the natural raw material

Product Profile

ZeroTP enjoy¹⁰ GMP is a concentrated powdered protein supplement, based on Glycomacropeptide (GMP) – supplemented with the highly purified L-amino acids Alanine, Arginine, Aspartic acid, Glutamic acid, Glycine, Histidine, Leucine, Lysine as well as Tryptophan and enriched with soluble fibre from partially hydrolyzed maize starch (polydextrose). This indigestible fibre shows prebiotic effects, improves the gastrointestinal function and positively influences the gut flora.

ZeroTP enjoy¹⁰ GMP

- shows a small amount of Phenylalanine and Tyrosine, deriving from the natural raw material GMP
- contains some carbohydrate and fat
- gives a tasty milkshake-like drink
- offers a palatable option to a conventional amino acid mixture for the dietary management of Tyrosinemia
- can contribute to an improved acceptance and compliance
- is supplemented with vitamins, minerals and trace elements
- is suitable from 3 years of age.

Glycomacropeptide (GMP), the base of ZeroTP enjoy¹⁰ GMP

GMP is the natural protein source in **ZeroTP enjoy¹⁰ GMP**. GMP is a casein-derived peptide in milk protein. During the

process of cheese-making through rennet clotting this peptide is released from casein and passes into the liquid whey. From there it is isolated and purified by means of special technological processes.

Pure GMP is initially free from Phenylalanine and Tyrosine, during the production process however, it receives a slight contamination with Phe and Tyr. Some indispensable and conditionally indispensable amino acids (e.g. Arginine, Histidine, Leucine and Tryptophan) are not or almost not present in GMP. When these are supplemented, however – according to the amino acid profile of human milk – (as it is the case in **ZeroTP enjoy¹⁰ GMP**) the protein supplement shows a high biological value.

A protein supplement based on GMP

- is characterized by good gastrointestinal tolerance
- has a mild taste and thus supports compliance
- creates a good feeling of satiety after intake
- supports the formation of a healthy gut flora through prebiotic effects
- acts anti-inflammatory against metabolic stress
- leads, due to delayed breakdown, to a slower increase of plasma amino acids and an improved nitrogen retention in comparison to an amino acid mixture.

Amino Acids

ZeroTP enjoy ¹⁰ GMP	100 g	18,5 g
L-Alanine	g	5,8
L-Arginine	g	3,9
L-Aspartic acid	g	6,7
L-Cystin	g	0,03
L-Glutamic acid	g	10,5
Glycine	g	5,9
L-Histidine	g	1,6
L-Isoleucine	g	3,4
L-Leucine	g	5,0
L-Lysine	g	3,1
L-Methionine	g	0,7
L-Phenylalanine	mg	92
L-Proline	g	3,8
L-Serine	g	2,4
L-Threonine	g	5,5
L-Tryptophan	g	1,0
L-Tyrosine	mg	14
L-Valine	g	2,7

GOOD TO KNOW

Hydrolyzed Maize Starch (Polydextrose)

By means of a special manufacturing process, maize starch is partially hydrolyzed and enzymatically converted into a predominantly indigestible dietary fiber (polydextrose). The indigestible portion (α -1,6-glycosidic bonds) enters the colon, where it serves as substrate for beneficial intestinal bacteria. Thereby, the short-chain fatty acids acetate, butyrate and propionate are formed as microbial degradation products. The use of polydextrose leads to an increase in the number of beneficial bacteria in the colon and improves stool consistency. Butyrate lowers the pH in the intestine and thus promotes the growth of beneficial intestinal bacteria, too. It is the main source of energy for colon cells and shows anti-inflammatory effects. Propionate is involved in the regulation of gastrointestinal hormones, resulting in lowering blood sugar levels and inducing a stronger feeling of satiety. Short-chain fatty acids also inhibit cholesterol synthesis in the liver and lead to a reduction in LDL cholesterol in the blood.

Administration

When switching from a Phenylalanine- and Tyrosine-free amino acid mixture (AAM) to **ZeroTP enjoy¹⁰ GMP**, the following should be kept in mind:

ZeroTP enjoy¹⁰ GMP can be introduced gradually, i.e.: replacing the AAM by **ZeroTP enjoy¹⁰ GMP** or incorporating **ZeroTP enjoy¹⁰ GMP** into the daily diet step by step. Depending on individual tolerance either a part or the total amount of AAM may be replaced by **ZeroTP enjoy¹⁰ GMP**.

Important: Regular monitoring of blood-Phe- and Tyr-levels.

If the total needs of protein supplement are covered by **ZeroTP enjoy¹⁰ GMP**, an increase of Phe- and Tyr-levels may be observed in some circumstances. In this case consumption of natural, Phe- and Tyr-containing, foodstuffs should be restricted, as appropriate – in consultation with the metabolic center.

ZeroTP enjoy¹⁰ GMP may be taken, for example, as a snack in between or as a late snack, without the need for a concurrent consumption of Phe- and Tyr-containing foods. The energy sources contained prevent the GMP and the amino acids from being used for energy production after resorption.

Dosage The daily total amount of protein supplements depends on age, body weight and individual medical condition/protein tolerance and should be re-examined and adjusted in accordance with the results of regular monitoring.

The daily dosage of protein supplements should at best be divided into 3 – 5 single portions.

ZeroTP enjoy¹⁰ GMP can be combined with other products from the **ZeroTP**-system.

The diet must be supplemented with energy, natural protein and other nutrients in prescribed quantities.

References:

- Hosseini, E., Grootaert, C., Verstraete, W. and Van de Wiele, T., 2011. Propionate as a health-promoting microbial metabolite in the human gut. *Nutrition Reviews* 69: 245 – 58.
- Röytio H and Ouwehand HC, The fermentation of polydextrose in the large intestine and its beneficial effects. *Beneficial Microbes*, 2014, 5(3): 305 – 314.
- Schulze-Lohmann P: Ballaststoffe Grundlagen – präventives Potenzial – Empfehlungen für die Lebensmittelauswahl. *Ernährungs Umschau* 7/2012: 408 – 17.

Preparation

Fill drinking water into a shaker, empty 1 sachet **ZeroTP enjoy¹⁰ GMP** into it. Shake – ready!

We recommend the following amounts of water: 80 – 100 ml + 1 sachet **enjoy¹⁰** (≈ 10 g PE)

It can also be prepared with more or less water, as requested.

Always prepare freshly!

Function **ZeroTP enjoy¹⁰ GMP** substitutes that part of the protein in the diet which may not be taken up from natural food sources.

Indication **ZeroTP enjoy¹⁰ GMP** is a food for special medical purposes and as protein supplement suitable for the dietary management of Tyrosinemia.

NUTRITION INFORMATION			
ZeroTP enjoy ¹⁰ GMP		100 g	18,5 g
Energy	kJ	1241	230
	kcal	294	54
Fat	g	2	0,3
of which			
saturates	g	1	0,17
mono-unsaturates	g	0,6	0,10
polyunsaturates	g	0,1	0,02
Carbohydrate	g	8	1,5
of which sugars	g	0,8	0,15
Fibre	g	14	2,5
Protein eqv.	g	55	10
Salt	g	1,6	0,3

g protein

Vitamins				
Vitamin A	µg	978	181	18
Vitamin D3	µg	22	4	0,4
Vitamin E	mg	19	3,6	0,35
Vitamin K1	µg	70	13	1,3
Vitamin C	mg	114	21	2
Thiamin (Vit. B1)	mg	2	0,35	0,035
Riboflavin (Vit. B2)	mg	2	0,4	0,04
Niacin	mg	43	8	0,8
Vitamin B6	mg	1,8	0,3	0,03
Folic acid	µg	217	40	4
Vitamin B12	µg	3,5	0,7	0,065
Biotin	µg	44	8	0,8
Pantothenic acid	mg	7	1,3	0,13

Minerals

Sodium	mg	627	116	11
Potassium	mg	657	122	12
Calcium	mg	1502	278	28
Phosphorus	mg	943	175	17
Magnesium	mg	258	48	5

Trace elements

Iron	mg	20	3,6	0,36
Zinc	mg	20	3,6	0,36
Copper	mg	2	0,4	0,04
Manganese	mg	6	1,1	0,11
Fluoride	mg	0,8	0,15	0,015
Selenium	µg	79	15	1,4
Chromium	µg	109	20	2
Molybdenum	µg	92	17	1,7
Iodine	µg	244	45	4,5

FURTHER NUTRITION INFORMATION

L-Carnitine	mg	49	9	0,9
Choline	mg	489	90	9
myo-Inositol	mg	255	47	5
Taurine	mg	54	10	1

Delivery Unit	box, sachets (sa) 30 sa at 18,5 g = 555 g
Article Number	xx-001-31131
Delivery to	Pharmacies, clinics
Storage	Store in a cool, dry place.



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INGREDIENTS

Glycomacropeptide (milk), 15,5 % maize dextrin, L-arginine-L-aspartate, glycine, maltodextrin, L-glutamic acid, L-leucine, L-alanine, calcium phosphate, L-lysine-L-aspartate, vegetable oils (palm oil, rape seed oil, sunflower oil), L-histidine, flavouring, stabilizer: carrageenan, magnesium carbonate, L-tryptophan, choline, emulsifier: E 472c & sunflower lecithin, antioxidants: E 304 & E 306, inositol, ferrous sulphate, vitamin C, sweetener: sucralose, taurine, zinc sulphate, L-carnitine, niacin, vitamin E, manganese sulphate, pantothenic acid, cupric sulphate, vitamin B2, vitamin B6, vitamin B1, sodium fluoride, vitamin A, chromium (III) chloride, potassium iodide, sodium molybdate, folic acid, sodium selenite, vitamin K, biotin, vitamin D, vitamin B12.