Consumer Information

ADPRO104

In Short

- AdPro104 is a protein concentrate in powder form containing 80 % total protein – on the basis of whey protein of the high biological value of 104 – Food for Special Medical Purposes (FSMP)
- for use in the dietary management of disease related protein malnutrition
- enriched with vitamins, minerals and trace elements according to RDI from Germany, Austria and Switzerland (2019)
- suitable from 1 year of age
- in convenient portion sachets at 12,5 g (≙ 10 g protein) and in tins of 400 g and 1000 g

Product Profile

AdPro104 is a protein concentrate in powder form containing 80 % total protein – on the basis of whey protein of the high biological value of 104.

AdPro104 is enriched with vitamins, minerals and trace elements according to RDI from Germany, Austria and Switzerland (2019). 62,5 g AdPro104 (approx. 50 g protein) cover 50 % of the recommended daily intake of an adult.

AdPro104 is suitable for supplementing the daily protein intake in case of increased protein needs or when protein intake with the usual diet is insufficient.

AdPro104 is suitable for the dietary management of disease related protein malnutrition – from 1 year of age.

AdPro104 is

> almost neutral in taste
> easily digestible
> soluble in cold and warm food and beverage
> no thickening
> suitable for supplementing sweet and savoury meals or drinks and also doughs
> gluten-free, fructose-free
> free of fibre
> stable during cooking and baking, acid-stable
> can be added to tube feeds – for enteral use only.

Whey Protein – High Quality Protein

Nutritionally, proteins are evaluated according to their amino acid composition, digestibility and biological availability.

• Biological Value (BV 104)

The biological value (BV) is a degree for the quality of food protein. The higher the BV, the more efficiently the body's own protein can be produced from the food protein ingested. Dietary proteins with a high BV ensure a well-balanced relationship between protein breakdown and protein synthesis and counteract protein deficiency caused by disease. In order to be able to compare proteins with each other, a reference protein is used. In the case of BV, whole egg protein (chicken egg) serves as reference protein with the defined BV 100. Whey protein, like in AdPro104, has BV 104 (1). In comparison: Rice protein has BV 82, soy protein BV 84 and milk protein BV 85 (2). BV 104 of whey protein states that more endogenous protein can be built from this dietary protein than from the same amount of whole egg protein. Thus: Whey protein is a highly efficient source of protein.

What causes these different biological values? The BV depends on the composition of the amino acids (AAs) of the respective dietary protein, i. e. the ratio of indispensable and dispensable AAs to one another. The more this ratio corresponds to the amino acid profile of the body's own protein, the higher the BV. The decisive factor here is the content of indispensable AAs.

Of the 20 proteinogenic AAs of which a dietary protein can consist, 9 AAs are indispensable. Indispensable AAs cannot be produced by the body itself and must be supplied through food. Among the indispensable AAs are Histidine, Isoleucine, Leucine, Lysine, Methionine, Phenylalanine, Threonine, Tryptophan and Valine.

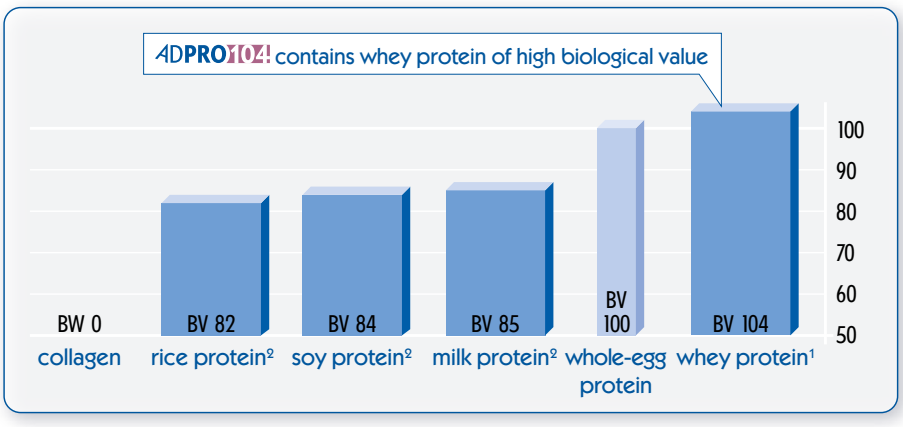
To ensure for a good protein balance and an optimal build-up of the body's own protein, all essential AAs must be made available by dietary protein – in quantities according to the daily requirements. Whey protein ensures this, because with BV 104 it has the highest content of indispensable AAs compared to other single protein sources like soy, rice and pea protein.

Higher BVs can only be achieved by a balanced combination of different plant and animal proteins. However, if the content of one or more essential AAs within the dietary protein is limited, the body´s own protein synthesis is impaired. Moreover, if a dietary protein lacks only one of the indispensable AAs, it´s biological value tends to almost zero, such as the protein Collagen, which lacks any Tryptophan.

• Optimal Amino Acid Profile

Within the group of indispensable AAs, the AAs Isoleucine, Leucine and Valine are grouped together as branched-chain

Biological Value (BV) of Proteins



AAs (BCAAs). Whey protein is rich in BCAAs.
In comparison, soy and pea protein have only half the amount of BCAA and hemp protein even has only one third of the amount of BCAAs.
BCAAs play important roles in our body and are involved in energy production, blood sugar regulation and muscle protein synthesis (3).

- **Easy Digestibility**

Whey protein is easily digestible – this is particularly advantageous for patients who are cachectic and/or anorexic due to a primary disorder, as well as for patients who underwent surgery or are prone to vomiting.

Micronutrients

AdPro104 is enriched with all important micronutrients. Particularly to be emphasized are:

> Calcium and Vitamin D: Contribute to the maintenance of bones and teeth.
> Vitamin B12: Contributes to normal neurological and mental function and can help reduce fatigue and exhaustion.
> Magnesium: Contributes to normal muscle function and protein synthesis.
> Iron: Contributes to normal muscle function and protein synthesis.
> Zinc: Contributes to normal functioning of the immune system, maintenance of normal skin and protein synthesis.

Important Notice Must only be used under medical supervision. Not for use as a sole source of nutrition. For enteral use only. AdPro104 must not be used in cases where enteral nutrition is contraindicated or when intolerances or allergies exist to just one of the ingredients contained.
AdPro104 is not suitable for infants in the first year of life.

Dosage and Usage

Ideally the daily dosage should be spread over several meals.

Adults: A diet plan should, in consideration of the individual protein requirement, establish the daily amount of AdPro104.
Children: Considering the RDI from Germany, Austria and Switzerland (2019) for protein, we recommend for children the following daily maximum quantities of AdPro104:

> 1 – 3 years: max. 18 g ≙ 14 g protein
> 4 – 6 years: max. 23 g ≙ 18 g protein
> 7 – 10 years: max. 33 g ≙ 26 g protein

Preparation

- **Fortification of Beverages and Foods**

We recommend

> 12,5 g/1 sachet (≙ 10 g protein) per 150 – 200 g food/drink.

(The scoop enclosed measures approx. 12,5 g AdPro104 when levelled.)
For mixing AdPro104 with foods, it is advisable to use a whisk or an immersion blender – when mixing AdPro104 into drinks (as a shake) we recommend the use of a shaker.
Mixing AdPro104 into very hot meals may cause flocculation. This reaction is harmless to health. To avoid this, remove the meal from the stove before adding AdPro104 and let cool down a bit.
AdPro104 prepared as a shake with a shaker, can be flavoured in various tastes with **AroMaxx** aroma modules from metaX.
Always fortify meals and drinks with AdPro104 freshly.

- **Fortification of Doughs**

When fortifying doughs, mix AdPro104 with the flour first. Batters for making muffins and waffles may be fortified with up to 50 g AdPro104 per 100 g flour.

References:
1) Hoffman, J. R., & Falvo, M. J. (2004). Protein – Which is Best?. Journal of sports science & medicine, 3 (3), 118–130.
2) Vaupel P. und Biesalski H.K. Proteine. In: Biesalski, HK, Bischoff SC, Puchstein C, editors. Ernährungsmedizin, Thieme Verlag, 2012, 4. überarbeitete Auflage, Seite 125. doi: 10.1055/b-0037-147932
3) Gorissen S. H. M. et al. (2018). Protein content and amino acid composition of commercially available plant-based protein isolates. Amino Acids, 50(12):1685-1695. https://doi:10.1007/s00726-018-2640-5

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NUTRITION INFORMATION

AdPro104		100 g	12,5 g 1 sachet
Energy	kJ	1497	187
	kcal	353	44
Fat	g	2,4	0,3
of which			
saturates	g	1,5	0,2
mono-unsaturates	g	0,7	0,08
polyunsaturates	g	0,4	0,05
Carbohydrate	g	3	0,4
of which sugars	g	2,3	0,3
Lactose	g	2,2	0,3
Fructose	g	0	0
Fibre	g	0	0
Protein	g	80	10
Salt	g	1,1	0,14
Vitamins			
Vitamin A	µg	770	96
Vitamin D3	µg	15	2
Vitamin E	mg	9	1,1
Vitamin K1	µg	62	8
Vitamin C	mg	80	10
Thiamin (Vit. B1)	mg	0,8	0,1
Riboflavin (Vit. B2)	mg	1	0,12
Niacin	mg	10	1,2
Vitamin B6	mg	1	0,12
Folic acid	µg	232	29
Vitamin B12	µg	6	0,8
Biotin	µg	35	4
Pantothenic acid	mg	5	0,6
Minerals			
Sodium	mg	450	56
Potassium	mg	899	112
Chloride	mg	104	13
Calcium	mg	1083	135
Phosphorus	mg	639	80
Magnesium	mg	271	34
Trace elements			
Iron	mg	8	1
Zinc	mg	9	1
Copper	mg	0,9	0,11
Manganese	mg	2,7	0,34

FURTHER NUTRITION INFORMATION

		100 g	12,5 g 1 sachet
Selenium	µg	55	7
Chromium	µg	25	3
Molybdenum	µg	56	7
Iodine	µg	139	17
Amino acids			
L-Alanine	g	4,6	0,57
L-Arginine	g	1,8	0,23
L-Aspartic acid	g	9,3	1,17
L-Cystine	g	1,9	0,24
L-Glutamic acid	g	15,7	1,97
L-Glycine	g	1,3	0,17
L-Histidine	g	1,5	0,19
L-Isoleucine	g	5,6	0,69
L-Leucine	g	9,3	1,17
L-Lysine	g	8,3	1,04
L-Methionine	g	1,9	0,24
L-Phenylalanine	g	2,6	0,32
L-Proline	g	5,4	0,67
L-Serine	g	4,2	0,52
L-Threonine	g	6,2	0,77
L-Tryptophan	g	1,6	0,19
L-Tyrosine	g	2,3	0,29
L-Valine	g	5,0	0,63

Osmolality

AdPro104 (g)	Drinking water (ml)	Osmolality (mosmol/kg)
12,5	100	71
12,5	200	34

INGREDIENTS

Whey protein, calcium phosphate, magnesium carbonate, maltodextrin, emulsifier: ***soy lecithin***, calcium carbonate, flavourings (natural flavouring (contains ***milk components***), flavouring vanillin), vitamin C, ferric diphosphate, vitamin E, zinc sulphate, niacin, vitamin A, manganese sulphate, vitamin D, pantothenic acid, cupric sulphate, vitamin K, vitamin B6, vitamin B1, vitamin B2, folic acid, potassium iodide, sodium molybdate, chromium (III) chloride, sodium selenite, biotin, vitamin B12.

Delivery Unit	400 g tin	1000 g tin	6 x 400 g tin	6 x 1000 g tin	25 x 12,5 g = 312,5 g sachet/box
Article Number	xx-002-41016	xx-002-41012	xx-002-41017	xx-002-41015	xx-002-41018
Delivery to	Wholesalers, pharmacies, clinics, patients				
Storage	Store in a cool, dry place.				

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