

PRESS RELEASE

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Creatine product "Creavitalis": Wholesome taste and positive benefits for vegetarian and vegan foods

Meat substitutes are very much in vogue. Burgers, bratwurst, cold cuts - there is hardly a product for which there is not now a meat-free variant. Manufacturers of plant-based alternatives to meat, fish and dairy products can now use a new food supplement that could be groundbreaking: Creatine monohydrate, commonly known as creatine. The Federal Office of Consumer Protection and Food Safety confirmed on 30 May 2023 that creatine monohydrate may be regularly used in foodstuffs throughout the EU. It therefore does not fall under the Novel Food Regulation.

This is the result of a consultation request launched by the company Alzchem.

Under the brand name Creavitalis[®], Alzchem will launch specially prepared creatine monohydrate as a fine, tasteless powder for the food industry in the autumn and distribute it worldwide. Already at a dosage of 0.5 grams of Creavitalis[®] per 100 grams of food, the creatine content of meat is reached. One launch customer is the Munich-based company Grillido with a plant-based fillet containing creatine.

Creatine is an endogenous compound that occurs in the body's muscle cells, among other places, and plays a central role in energy metabolism as creatine phosphate. Scientific studies have been looking at the positive effects of creatine for a long time.^{[1][2]} People who eat meat and fish automatically take in some creatine with their food - in contrast, dairy products and plants contain little or no creatine. This means that vegetarians, vegans and flexitarians consume little or no creatine in their diet.

In general, interest in the diverse effects of creatine in the body is increasing more and more. More than 30 universities worldwide are currently conducting research on this topic. "We see great opportunities, especially for manufacturers of meat substitute products. By adding creatine monohydrate, they can close a nutrient gap to animal products and thus help consumers to

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better achieve their nutritional goals," explains Robert Alber, Vice President Human Nutrition at Alzchem in Trostberg, Bavaria. In this way, new foods can experience a functional upgrade thanks to Creavitalis®."

Creatine - a worldwide megatrend

In Germany, creatine products are already real sales hits in drugstores and discounters. Alzchem has been producing creatine monohydrate in Germany for more than 30 years and is the only manufacturer outside China to successfully market it to customers in the sports supplement sector - the positive effect of creatine has long been known among professional athletes.

The synthetic production of creatine also makes it suitable for vegan nutrition. Due to the growing interest outside of sports, Alzchem is now launching Creavitalis®, a variant optimised for the needs of the food industry.

There are two EU Health Claims for creatine monohydrate, which have been approved by the European Food Safety Authority (EFSA). These health claims confirm the positive effects of creatine on physical performance as well as on the maintenance of muscle mass^{[3][4]} In addition, numerous scientific studies confirm the valuable effects of creatine monohydrate on the body. A good overview of the current studies can be found at www.creatineforhealth.com.

The reason for the federal agency's decision is that creatine monohydrate has been used for human consumption in the EU for over 25 years. In the USA, the FDA^[5] classified creatine monohydrate as GRAS (Generally Recognized as Safe) in 2020, which means it can be used as a food ingredient without special approval.

About creatine

Creatine monohydrate is a proven, high-quality form of creatine known for its stability, bioavailability and positive effects on physical performance. It is currently widely available as a dietary supplement in powder or capsule form.

The body produces the basic creatine phosphate requirement via creatine itself from the amino acids glycine, arginine and methionine. However, these amino acids are then no longer available to the body for the formation of other substances, e.g. hormones and neurotransmitters. An intake of creatine through food or fortified foods can relieve the body's own synthesis and also replenish the creatine stores.

About Alzchem

Alzchem is a globally active specialty chemicals company that is one of the market leaders in most of its fields of activity. Alzchem benefits from the three very different global developments climate change, population growth and longer life expectancy in a unique way. Alzchem products can offer attractive solutions for achieving the resulting social goals in a multitude of different applications.

The company sees interesting growth prospects for itself in the areas of human and animal nutrition and agriculture in particular. As a result of population growth, it is necessary to achieve efficient food production. Pharmaceutical raw materials and creatine products can contribute to a healthy old age as life expectancy increases. Alzchem is facing up to the goal of sustainability arising from climate change in the field of renewable energies and across the entire company. The fields of fine chemicals and metallurgy offer just as great a perspective.

Alzchem Group AG's broad product range includes dietary supplements, precursors for corona tests and pharmaceutical raw materials. These products are the company's response to global trends and developments. Alzchem is ideally positioned in this respect and considers itself well prepared for an environmental future and global developments.

The company employs around 1,680 people at four production sites in Germany and a plant in Sweden, as well as three sales companies in the USA, China and England. Alzchem generated Group sales of around EUR 542.2 million and EBITDA of around EUR 61.4 million in 2022.

^[1] Kaviani, M., Shaw, K., & Chilibeck, P. D. (2020). Benefits of Creatine Supplementation for Vegetarians Compared to Omnivorous Athletes: A Systematic Review. *International journal of environmental research and public health*, 17(9), 3041. <https://doi.org/10.3390/ijerph17093041>

^[2] Konstantinos Prokopidis and others. Effects of creatine supplementation on memory in healthy individuals: a systematic review and meta-analysis of randomized controlled trials. *Nutrition Reviews*, Volume 81, Issue 4, April 2023, Pages 416–427, <https://doi.org/10.1093/nutrit/nuac064>

^[3] <https://efsa.onlinelibrary.wiley.com/doi/epdf/10.2903/j.efsa.2011.2303>

^[4] <https://efsa.onlinelibrary.wiley.com/doi/epdf/10.2903/j.efsa.2016.4400>

^[5] <https://www.fda.gov/media/143525/download>