

FFoQSI
Austrian Competence Centre for
Feed and Food Quality, Safety
and Innovation

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Centers for Excellent Technologies

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multi-firm



King Oyster Mushroom

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KING OYSTER MUSHROOMS DELIVER VALUABLE RAW MATERIALS FOR DELICIOUS AND SAFE FOOD

QUALITY ASSURANCE OF KING OYSTER MUSHROOMS FOR THE PRODUCTION OF VEGETARIAN PRODUCTS

Edible mushrooms are part of the human diet as complex dishes, salads or soups. The nutritional aspects and phytochemical compounds of mushrooms confer human health. Mushrooms contribute to a pure and light diet with high antioxidant content, carbohydrates and protein, but also essential fatty acids and vitamins.

Alternatives to meat are gaining in popularity; however, the full and familiar taste experience is the future trend. After many years of research and development, an Austrian Producer has succeeded to successfully launch a broad range of products “alternative to meat” made from king oyster mushrooms.

As part of a work package of the FFoQSI project "Food Design", the high quality standards of the production and processing of king oyster mushrooms as the main raw material for innovative products are now to be optimised together with the Department of Food Microbiology at the University of Veterinary Medicine Vienna and the Center of Excellence Food Technology and Nutrition at the University of Applied Sciences Upper Austria.

For this purpose, the microbial load and the sensory quality of king oyster mushrooms are tested after harvest and after storage. These tests ensure a very good quality of the raw material and provide important information for the optimisation of breeding conditions. In parallel, mushrooms from

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Austrian retail level are examined in comparison. In the course of the project the investigation of macronutrients is also planned.

The results indicate a high product quality and safety of king oyster mushrooms produced in Austria. The microbial load is rather low and sensory quality high, even after refrigerated storage for several days. Another positive aspect is that potential human pathogens such as *Listeria monocytogenes*, *Salmonella* or *Bacillus cereus* have neither been detected in samples of mushroom production of the partner company nor in retail samples.

Impact and effects

With the knowledge gained, safe and high-quality mushroom products can be guaranteed. This is a basic prerequisite for the manufacturer to produce innovative vegetarian products of consistently high quality. The range of various vegetarian products based on king oyster mushrooms allows flexitarians (semi-vegetarians) to supplement their meat diet with healthy and tasty alternatives.

Due to an increasing demand for meatless products, the company is able to further expand the new product line.

One positive ecological side effect is that king oyster mushroom production and processing are located side by side, which also saves transport capacity and contributes to reduce environmental emissions.



king oyster mushrooms from Austrian production site
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Additional jobs will be created at the production site in Austria in order to cope with the tasks.

Project coordination (Story)
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Project partners

- Neuburger Fleischlos GMBH, Austria
- University of Veterinary Medicine, Vienna, Austria
- University of Applied Sciences Upper Austria

This success story was provided by the consortium leader/centre management and by the mentioned project partners for the purpose of being published on the FFG website. Further information on COMET: www.ffg.at/comet