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Mycoprotein

Discover the potential

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Mycoprotein



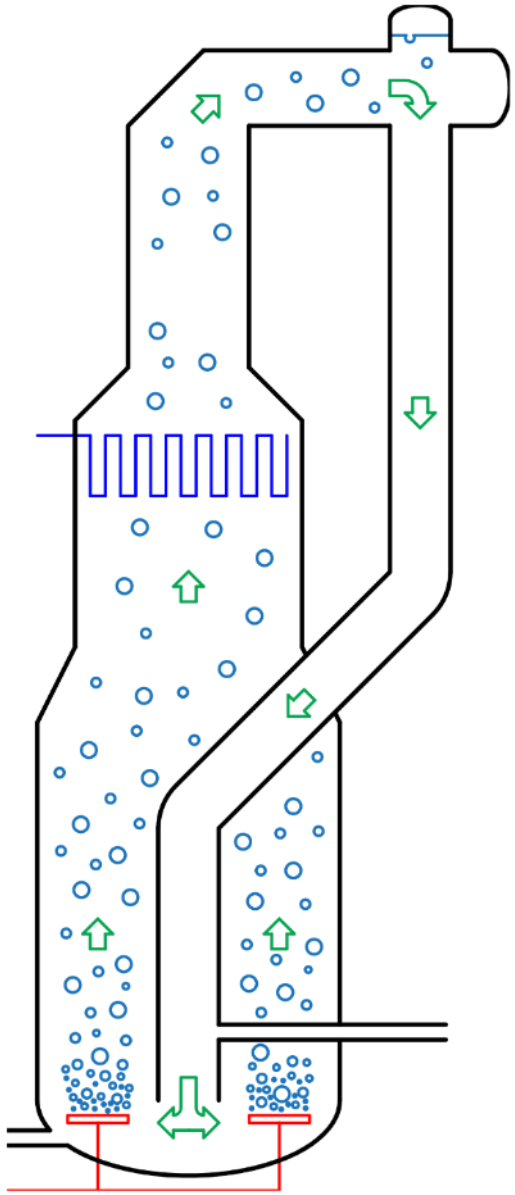
- Fungus-based protein
- Produced through controlled fermentation
- Made using a fungal starter culture, glucose, water and essential nutrients
- Naturally fibrous texture, ideal for meat alternatives

Starter culture (*Fusarium*) is added to glucose and water in the vertical fermentation units.

1

The ingredients start to ferment. During this growth process, the fungi multiply.

2



It forms into a dense, fibrous structure similar to the texture of meat.

3

Mycoprotein is harvested and further processed into a food ingredient.

4

Source: Controlled Mold

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What's fermentation?

Fermentation is nothing new. Even in ancient times, people fermented foods to preserve them longer, and to improve their taste and texture. Products are fermented by bacteria, yeasts or fungi. Fermentation is a natural process.

Fermentation can happen spontaneously, like with sauerkraut. Or by adding certain desired micro-organisms: a starter culture.

During the fermentation process, the substances (mainly starch and sugars) in the food are converted or broken down by the enzymes of the bacteria or other micro-organisms present.

Fermentation causes changes in the acidity, taste, texture, smell, digestibility and shelf life of the product.



Yoghurt



Beer



Sauerkraut



Cheese



Tempeh



Source: Gezond leven

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How can mycoprotein be used?

- Mycoprotein has a meat-like texture and can take on different flavours, making it suitable for a wide range of meat substitutes.
- This offers opportunities to use this raw material for other types of products as well.
  - Examples are: Plant-based chicken pieces, cubes and nuggets









Health benefits of mycoprotein



High in protein

Naturally contains dietary fibre
Contains all 9 essential amino acids

Contains various micronutrients, including B vitamins and minerals

Typically low in saturated fat

Naturally cholesterol-free

Source: Quorn, Science Direct

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Sustainability benefits of mycoprotein

Mycoprotein offers promising environmental benefits compared to many animal-based proteins.

- **Land use:** Generally requires less agricultural land than conventional meat production.
- **Carbon footprint:** Can result in lower greenhouse gas emissions than certain animal-based proteins.
- **Water footprint:** Offers potential benefits, depending on the production process and comparison.



Source: Quorn and Pubs

Below the findings of a study looking at key factors that encourage and discourage consumers' willingness to try, buy and pay a higher price for mycoprotein.

How do consumers perceive mycoprotein?




Biggest driver behind willingness to consume mycoprotein is **health**, followed by nutritional values, safe to eat and **sustainability**.




Affordability and **taste** showed varying results.





The willingness to consume mycoprotein was slowed if it was thought that people could not miss the **nutrients** from **meat** and, to a lesser extent, if the taste, texture and smell of meat were considered important.

Source: PubMed Central

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Henrieke Ouwerkerk, Sr. Product Developer:
“This development fits perfectly into our vision. Mycoprotein is a nutritious and innovative protein source with a unique fibrous texture. It also offers promising opportunities for developing products with a lower environmental impact. By incorporating mycoprotein into our portfolio, we can offer our customers new possibilities for plant-based product development. I'm proud to present these two innovations from Schouten.”





Mycoprotein Nuggets


Mycoprotein Cubes


Take the journey with us..
into mycoprotein

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Do you have any questions or remarks, get in touch via jdgeus@schoutenfood.com.

Janna de Geus
Marketing & Communicatie Strateeg

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