

Patent: Culture of microorganisms in milk whey

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Description

This patent refers to a protocol for the culture of microorganisms in milk whey, a highly polluting byproduct from the dairy industry, such as cheese-making.



Need or problem solved and how

- Turning milk whey, a byproduct of the dairy industry that is highly polluting when spilled to good use, due to its high organic matter contents and its high biological oxygen demand.
- **Reducing the cost of dairy industry spill decontamination, as the presence of milk whey in spills leads to a costly decontamination process.**
- Microorganisms used in this invention naturally produces a fatty acid that is essential in the diet of most of the marine species cultured in aquaculture. **These microorganisms could be useful for enriching the fatty acids essential for the nematode *C. elegans*, so that the latter can serve as live food for fish larvae and be used for the manufacture of fattening food.**

Innovative issues/Competitive advantages

- **Researchers in the field have also patented a method for enriching the nematode *C. elegans* for its utilisation in aquaculture and aquariums through the use of microorganisms.**
- The fact is that, currently, the culture of seawater fish larvae is based on the use of rotifers and artemia; however ***C. elegans* has a series of exceptional advantages making it possible to design food customised to the needs of larval feeding in aquaculture.**
- It is significant that it is now possible to breed fish larvae in fresh water (zebra fish), as well as those of gilthead (*Sparus aurata*) and sea bass (*Dicentrarchus labrax*), by feeding them exclusively with these nematodes.

Types of interested companies

- Dairy industries: cheese-making plants, milk producers, companies manufacturing ice-cream, yoghurt, sour cream, butter, etc.
- Companies in the aquaculture and aquarium sector.