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Nature-inspired Cell Disruption with Algal Viruses for Cost-effective Lipid Extraction from Microalgae

A cost-effective, natural, virus-based method extracts lipids from algae for biofuel and aquaculture, yielding 3-fold higher results than traditional techniques.

Researchers at Purdue University have developed a new method for using algae in biofuel production. Other technologies such as sonication are often inefficient and costly, and many currently available algae-based processes involve complex lipid-extraction. The method created by Purdue researchers involves a controlled virus-based extraction process where algae can be disrupted in just six days and used to gather lipids from biomass. In testing, lipid yield was found to be 3-fold higher than that of traditional techniques. In addition, this all-natural cost-effective approach to biofuel synthesis shows no signs of lipid disturbance, and allows for easier collection of lipids.

Advantages:

-Cost-efficient

-Natural

-Fast

-Sustainable

Potential Applications:

-Biofuel

-Aquaculture

TRL: 6

Intellectual Property:

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