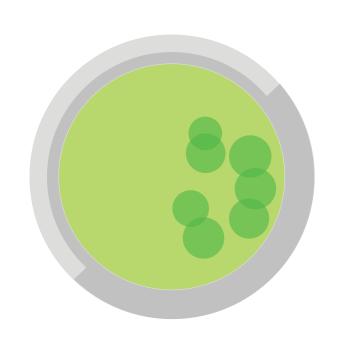
ALGAE BIODIESEL



Algae are organisms found in most habitats.
They multiply quickly and produce large quantities of oil that can be upgraded into a transportation fuel called biodiesel.

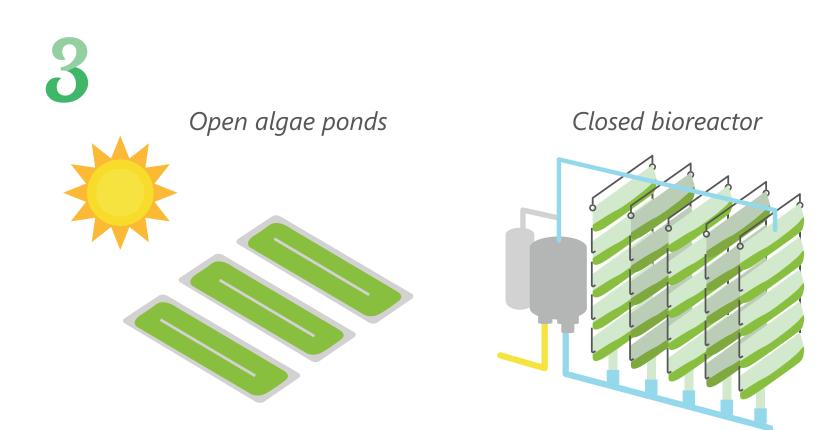
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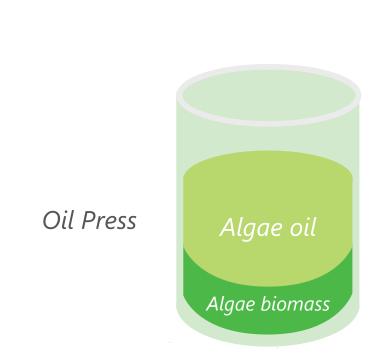
Organisms called algae produce oil that can be upgraded to make fuel. Different species of algae will contain different levels of oil.

Sunlight Water Carbon Dioxide

Algae multiply quickly and easily through a process called photosynthesis, meaning that they can produce their own food using only water, carbon dioxide, and sunlight.



When large batches of algae are produced for industry, they are either grown in open-pond systems or closed bioreactors.



The algae are harvested and oil is extracted from their cell walls. This can involve, for example, an oil press that squeezes out the lipids from the algae.

Biorefinery

After the oil is extracted, it is refined into biodiesel using a process called transesterification. It is heated, blended with methanol, cooled, and washed to remove impurities (see transesterification fact sheet).



After it is dried, the algal biodiesel is ready for use as transporation fuel.

Consulting researcher: Dr. David Levin (University of Manitoba) Adapted from information provided by the National Energy Laboratory at the U.S. Department of Energy and Algae. Tec Ltd.



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