Motivation

In order to make the production of biofuel from microalgae cost-efficient, a biorefinery concept of harvesting other valuable algae components is examined. Next to lipids microalgae contain large amounts of proteins (up to 47% [w/w]).

This abundance and their possible application as ingredients for food products make proteins an interesting target for a generic algae biorefinery concept.

However, microalgae proteins can only be applied as food ingredient if their techno-functional properties are satisfactory after isolation. Within this project the possibilities to gain high quality proteins for food and non-food applications will be explored.

Technological challenge

In contrast to earlier works on microalgae protein the aim of this project aims at the isolation of pure and native proteins from microalgae.

For this the set-up of a mild isolation protocol for proteins from microalgae is needed. Characterization and fractionation of the isolated protein will be performed afterwards.

The techno-functional properties of the isolated protein fractions and its possible applications as a food ingredient will be tested afterwards.