

Water management for micro algae cultivation facilities

Institute for Applied Biotechnology (IAB)

Project leader	Prof. Dr. techn. Heike Frühwirth
Funding	Southeast Asia - Europe Joint Funding Scheme for Science and Innovation
Partners	<ul style="list-style-type: none">• Dr. Baptiste Leroy: University of Mons (UM), Belgium• Dr. Thornthan Sawangwan: Ramkhamhaeng University (RU), Thailand• Muhamet Doertkardes: EnerGaia Co. Ltd. Thailand
Duration	2019 – 2022
Project description	<p>Sustainably produced foods, rich in bioactive compounds and vitamins, attract a lot of attention. A well-known and widespread representative, is the cyanobacterium <i>Arthrospira platensis</i> (brand name Spirulina). The cultivation of <i>A. platensis</i> requires a large amount of media water, which has to be replaced several times during the yearly production, resulting large amounts of <i>Arthrospira</i> wastewater, with a large accumulation of unused nutrients and chemicals.</p> <p>In an international consortium this challenge is addressed in developing a biological purification step for the algae purge water, with the aim of recycling it. In the current approach waste water containing metabolites are fed to an extremophilic yeast which has the ability to convert the short-chain sugars into valuable lipids. These lipids have the potential to serve as valuable foods. Therefore, the project has two main goals:</p> <ul style="list-style-type: none">• Reduction of water consumption• The production of biomass as an additional product stream with the potential to be a valuable food product <p>More information about the project "Water management for micro algae cultivation facilities"</p>

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