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# Funded Master-/Diplomathesis

## „Bio-refinery with food waste: production of liquid and gaseous biofuels“

The city of Vienna collects bio-waste such as food and canteen waste and utilizes it already in a local anaerobic digestion plant for biogas production.

In the frame of an industry-supported project, this bio-waste is used for an innovative bio-refinery concept in order to produce beside gaseous (bio-methane) also liquid biofuels (ethanol, butanol).

The bio-refinery concept consists of three fermentative processes; the core process is an ABE-fermentation with integrated continuously removal of products.

The project of the master thesis comprises an optimization of the up-streaming process (fermentative process) in lab-scale. Here, the aim is to maximize the yields of several liquid intermediates necessary for the subsequent ABE-fermentation. The gaseous products of the up-streaming process will be analysed, single components will be separated and utilized.

Data gained from this project will be included in the planning of a demonstration plant.

Requirements: interest and curiousness in scientific working

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