UNIVERSITÄT HOHENHEIM

INSTITUT FÜR AGRARTECHNIK

Fachgebiet für Konversionstechnologien nachwachsender Rohstoffe

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# Separation of hydroxymethylfurfural in continuous process

**Motivation:**

In recent years, much attention has been paid to the production of platform compounds from biomass. The chemical with huge potential are e.g. hydroxymethylfurfural (HMF), levulinic acid, furfurals, sugar alcohols, lactic acid, succinic acid, and phenols.

Synthesis of platform chemicals has been researched intensively for several decades; however, the purification is still a very new topic. One reason for this is that the purification strategy is mostly dependent on the solvent used during the synthesis and depends on the by-products in the reaction mixture.

In a process engineering, a large part of the manufacturing costs of a product is generally attributed to purification. An efficient purification strategy is, therefore, crucial for the economic viability of a process. The product can only be brought onto the market if a particular product purity is achieved. Therefore, it is very important to develop the cost-efficient separation and purification technology which are also environmentally friendly.

**Main objectives:**

- Literature review about separation technologies in biorefineries.
- Separation of HMF- state of the art.
- Optimisation of continuous separation process.

**Number of students:**

1-2

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