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**Abstract**

**GEA liquid / solid separation with sedimentation centrifuges for purification unit operations in biorefineries**

Biorefinery involves processing various biomass resources to isolate key components and chemicals for use in various industries, thereby reducing the carbon footprint and dependence on fossil fuels.

GEA sedimentation centrifuges such as decanter centrifuges and disc stack centrifuges are used in the main processing purification steps according to customer specifications.

In order to evaluate the individual almost liquid / solid unit operations of our customers project specific for our sedimentation centrifuge technologies we offer a joint process development which includes 3 stages the laboratory scale, the pilot scale and the production scale. In each scale, different goals are defined which are jointly coordinated so that this process development is target-guided. This established procedure is to be presented here in detail

In parallel GEA developed that the use of the variMaster decanter centrifuge is an excellent package to ensure the production and process reliability of our customer, which has been developed specifically for this application and is also presented in detail with the involved customer benefit