

Master Thesis Work:

Markets for and production of lignin-based flocculants and dispersing agents

Background & objective

The work by Lakehead University in Ontario Canada show interesting results for lignin-based flocculants. This master thesis work will focus the potential for this type of lignin-based flocculants and dispersing agents for the Nordic or European market.

The objective is to clarify where the market is and who are the actors are today on these different markets in the Nordic countries or EU, the potential to establish a production site in Värmland using a defined technology where lignin is modified to a flocculant or dispersing agent for a specific market and to identify if there are other actors in the field of “green” flocculants / dispersing agents. The demand on production of lignin-based flocculants/dispersing agents should be clarified and the information summarized into a road map for commercialization.

Challenges

- A map of today's actors in production and users as well as specific products
- Specifications
- Alternative “green” products
- Cost structure
- Drivers for change into “green” options and well as limitations
- Production demands – what is needed in terms of equipment and infrastructure etc.
- R&D challenges

Project Plan

The objective with this master student work is to clarify if it is possible to find a concept with good potential to form a business case in Värmland for the Nordic (or European) market. The work will focus use of available information which the master student/-s develop and refine. Limited experimental work can be justified in some cases.

Candidate

As a candidate for this Master Thesis work you should preferably like independent and creative work where you collect a lot of information by different contacts with the established actors in the field. A suitable background is industrial economy, chemistry, chemical technology and analytical chemistry. The candidate will need to have interest and skills in both technology, economy and business development. The work is planned for Q1 and Q2 2021.

Location

The LignoCity Initiative in Bäckhammar – cooperation with Karlstad University, Paper Province and RISE Bioeconomy.

Contact persons

The LignoCity Initiative:

- Karlstad University: Björn Sjöstrand (bjorn.sjostrand@kau.se)
- RISE Bioeconomy in Stockholm: Peter Rättö RISE (peter.ratto@ri.se)

Operative supervisors will be discussed and decided together with the master student.