



Agriculture and Food Industry Alliance

Complete Utilization in Coffee Production





Ultrasonic sonotrode and dried coffee pulp

For the production of coffee, only about half of the coffee cherry is used: the seed or bean. These are first processed and – in most cases – roasted in the importing country.

The so-called coffee pulp is currently not being used and pollutes the environment due to its poor composting properties.

Every year, up to 9.4 million tons of coffee pulp are produced as a by-product in global coffee production. Huge mountains of it on the plantations acidify the soil and pollute the groundwater. In addition, this type of storage releases the greenhouse gas methane and unpleasant odors, and attracts vermin.

These problems are to be counteracted by further processing parts of the coffee pulp.

Specifically, this involves bio-components for the production of functional food ingredients.

Here, the main focus is on the extraction of pectins. The special pectin-protein matrix extracted from coffee pulp is suitable as an emulsifier and stabilizer, enabling, for

example, the production of stable oil-in-water emulsions as in soft drinks.

Fraunhofer UMSICHT contributes its expertise in the context of research on an optimized extraction process.

The goal is a higher yield and improved product quality of the pectins.

In the research project, the influence of ultrasound on pectin extraction is being investigated with regard to yield, quality, and the relevant process parameters.

Ultrasound-assisted extractions are already used successfully for pectin extraction from fruit waste in juice production.

For further information, please follow the QR code.

