

Mgr inż. Radosław Wilk

Title.: „Innovative technology of seaweed extracts - components of fertilizers, feed and cosmetics.”

The aim of the doctoral thesis was to develop a technology for the production of a new formulation line based on solvent-free algal extracts with the use of supercritical carbon dioxide extraction. Various species of algae, including the biomass of algae from Baltic Sea, were tested in the research. The research was carried out on a large-laboratory scale and the properties of ready-made formulations were assessed, with particular emphasis on the content of organic compounds useful for plants (plant growth stimulants), animals (feed additives) and humans (cosmetics). As part of the research, the parameters of the extraction process, its efficiency and costs were determined, taking into account the material balance. Application batches of products were produced in a semi-technical installation, which were subjected to evaluation of functional properties in biological tests. Product Safety Data Sheets for individual applications and Technology Cards have been prepared.