Saving Energy by Upcycling of Side Streams

Publieke samenvatting / Public summary

Aanleiding

New processing configurations will have to be applied for the processing of alternative proteins, which usually are three times more energy intensive than processing of conventional animal protein streams. For example, the production of plant-based proteins will result in a considerable increase in energy use due to the use of water-intensive extraction processes and the resulting need for energy-intensive drying. As a consequence of intensive processing, various side streams are generated, often leading to only partial utilization of valuable raw materials, even though the entire input has undergone processing. To prevent the loss of intrinsic energy and resources, valorisation of these side streams is essential. However, achieving this through sustainable and energy-efficient processing technologies remains a significant challenge. While innovative dewatering and drying technologies are under development, their benefits in terms of energy reduction per kilogram of water extraction, and their influence on sustainability and product functionality remain uncertain.

Doelstelling

The objective of the SEUSS project is to advance the industrial processing industry for the valorisation of valuable side-streams, recover and incorporate water back into the process, feeding a more concentrated slurry to the drying step, reducing the overall energy consumption from 28.0 MJ/kg to 19.8 MJ/kg of final dried product.

Projectinformatie / Project information

Projectnummer / Project number
TKITOETKI2025_SUESS
Subsidiebedrag / Grant amount
€ 402.000,00

Algemene informatie / General information

Penvoerder / Secretariat
ISPT

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