



# Digestate processing



**Project:** CS-01-17  
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**Partners:** Evodos, VION Ingredients, Bio Energie Herk  
**Budget:** 50.000 Euro

## Objective:

For Vion Ingredients the objective is to investigate how much cost saving can be realized using the Evodos SPT when dewatering the digestate.  
 For Bio Energie Herk bvba the objective is to investigate what the maximum % of phosphates is that can be recovered using the Evodos SPT.

## Motivation:

The cost of disposing the digestate is an important element in the profitability of a digester. To limit the use of chemicals and to take out the maximum of water will reduce this disposal cost. At the same time phosphate is a valuable mineral when recovered and the more this phosphate is recovered in a dewatered cake the better this is for the business case.

## Project scope:

In this project several streams of digestate will be tested with the Evodos SPT. The DW % of the centrate and the cake will be measured. Also the % recovery of phosphates will be investigated. When during the project extra parties are interested to offer their digestate streams to test this will be taken into consideration.

## Applicability:

**VION Ingredients** produces high-quality products such as proteins, fats, haemoglobins, plasmas and gelatines from by-products of the meat-processing and meat industries. These products are used as ingredients in such highly diverse markets as pharmaceuticals, food, feed, energy, and technology. VION Ingredients is the global market leader for gelatine and invests in innovative processes, including the production of biofuel. VION Ingredients operates a digester of which one of the by-products is digestate.

**Bio Energie Herk bvba** has built a digester with a capacity of 20.000 T/a. The purpose of the installation is to produce energy in a sustainable way. Beside producing energy, Bio Energie is looking for ways to recover phosphates and to optimise the process to balance the Nitrogen en Phosphate in the separated streams.

**Evodos** has developed an innovative separation technology based on centrifugal force. This patented technology is better known under the name Spiral Plate Technology (SPT). At the moment Evodos has successfully applied the SPT for several companies around the world in the business of algae harvesting.

## Results:

### VION

- Good dewatering without flocculants
- Extra drying cost from higher moisture content balanced by flocculant savings

### Bio Energie Herk

- 60% phosphorous removed from vegetable and animal based digestate

