Adsorption of non-volatiles from food products

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Description

Voluminous side streams from food industry have a huge potential for use in other product processes. This might contribute to reduce waste generation and a more circular economy. Proteins, sugars, polyphenols and amino acids are some of the valuable products that can potentially be recovered from these side streams [1].

The concentration of these components may be low therefore, effective and selective separation techniques should be applied. In addition, the presence of impurities with limited industrial application and the presence of suspended particles represent a challenge.

The project objective is to evaluate different possibilities to selectively remove these valuable compounds from side stream of food products and fermentation broth using adsorption technology. Additionally, the formulation of a set of design rules based on adsorptive processes to upgrade food side streams will be developed.

High Throughput Screening (HTS) experimentation [2, 3] is used to evaluate different adsorbents to selectively capture the target compounds. Moreover, different modes of operation and process design will be evaluated.

References

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