

Mild Separation of Flavour-Active Components

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Description

Off-flavours are major concern to food industry and an evaluation of different methods that can adjust the level of these compounds through controlled processes to develop products which meet customer's satisfaction is needed.

Identification of off-flavours in food and accurate quantification of them are crucial in assessing the potential safety risks of a product and their analysis can be challenging since these compounds are present in low concentration levels [1].

This project aims for selective removal of flavour-active components from aqueous food streams which are typically low molecular weight and not distinctive in structure. For recovery of these components large process volumes need to be treated.

High throughput techniques which enable accurate and fast process development are used in combination with thermodynamic and mechanistic processes modeling. The experimental analysis is performed not only faster through parallel rather than sequential experiments, but also done smarter by using experimental design algorithms to obtain "best compromise" with few experiments as possible [2]. The ultimate process combines capabilities of high selectivity towards target components and manageability of large volume process streams.

References

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2. Fletcher, S.R., *High throughput approaches to designer products-myth or reality*. Colloids and Surfaces A: Physicochemical & Engineering Aspects, 2006. **288**(1-3): p. 21-25.