



BERRYPOM

With BERRYPOM it is proposed to analyse the value of berry by-products (pomace), to optimise the recovery of bioactive compounds from pomace material, and to incorporate processed berry pomace in cereal-based foods to take advantage of potential nutritional benefits that originate from fibre and bioactive substances in the pomace.

Food production chain sustainability, which refers to waste reduction and the exploration of innovative ways to increase resource efficiency, is of increasing importance. Fruit processing is a resource-intensive operation yielding up to 70 - 80% juice and 20 - 30% waste. The residue obtained after juice extraction by pressing contains insoluble cell wall fragments and attached bioactive compounds and is commonly recycled as animal feed, composted or utilised for biogas production. The current established usage potential of pomace is to produce pectin (e.g. from apple), or to reuse it as a substrate for pomace brandy. Because pulp residues are a rich source of phytochemicals such as polyphenols, composting results in a loss of valuable nutritional compounds. If utilised in suitable food products, they could be made available to consumers to improve health. Berries are usually exposed to minimal pesticide levels, making pomace an attractive nutrient source. Within the project, extraction methods will be evaluated to obtain products rich in phytochemicals. The influence of processing steps (e.g. drying or milling) on the antioxidant capacity of pomace will be analysed to optimise the recovery of bioactive compounds. These fibre extracts will then be utilised in different cereal-based foods and extruded products.

The project aims to add value to processing wastes that contain health-promoting components. We expect a substantial increase of knowledge concerning fibre and phytochemical extraction from berry pomace, on its suitability for enhancing nutritional and sensory properties of cereal-based foods, and on its effects of the sustainability of the food chain.
