Assessing varied food manufacturer's waste for further valorisation as industrial biotechnology feedstock

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Summary

Unavoidable byproducts and waste from food manufacturing could provide an important source of nutrients for fermentation and production of bioproducts. This project aims to quantify the variability of hydrolysate produced from food manufacturing wastes and screen their viability for biopolymer and biosurfactant production.

Aims

- Quantify the variability of hydrolysate produced from food manufacturing wastes
- Screen their viability for biopolymers and biosurfactants production
- Identify relationships between types of substrate variability in food wastes and their impact on the fermentation process
- Providing new avenues of valorising unavoidable food wastes.

Outcomes

- Six different waste streams characterised, allowing for assessment of the degree of variation in sugars, carbon and nitrogen seen in food manufacturing waste to be quantified
- Viability for producer growth and bioproduct formation evidenced, with different streams found to be more suitable for each producer

"The successful identification of uses for high-variability food waste could provide cheaper feedstocks for biotechnology and added value for the food industry on their unavoidable food wastes."

James Winterburn, The University of Manchester

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