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Validity of a unique trapping mechanism and application of the captured starch as a thickening agent

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A new and innovative trapping mechanism has been developed by Ivan Wood & Son Ltd., this device reduces the amount of starch and waste product (potato peel) being deposited in to the drainage systems and ensures that food manufacturers (small to medium sized) fulfil the requirement that no food waste is deposited in to the drainage system in Scotland by January 2016 (due to the New Waste Legislation 2012). The main aspects of this research is to validate its use within industry (i.e. to ensure that the product is compatible with small to medium sized businesses and to assess its efficiency in terms of starch removal and water usage as well as enhancing its capabilities (i.e. throughput). Areas of research include: Validate the starch trapping system to understand the mechanism of action for the removal of starch and this would include testing the hypothesis that all starch granules are removed; Understand if the starch removed from the system is of the quality that is expected within the food industry (i.e. is it the correct food grade), looking not only at the structural concepts of the starch granules but at the safety of the system including any microbiological agents that may be present; If the starch captured is not of food grade then an investigation into ways of cleaning this starch will be undertaken, it is hoped that this will be achieved with the use of a specialist membrane or additional filtering system, which will separate the dirt from the starch molecules in production (i.e. no secondary extraction required) and; If the starch can be cleaned and removed effectively from the trapping mechanism then this will be tested to ensure that it can be used in the development process perhaps as a thickening agent in vegetable stocks.

Biography

Lee-Anne McGee has completed her BSc Honors Degree in Forensic Science followed by a Master's in Professional Practice (MProf) in Food and Drink innovation at Abertay University. She is currently a KTP Associate with Abertay University and undertaking a Master's in Philosophy to validate the filtration system.

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