

TOWARDS SOME COMMON PROTOCOLS FOR THE EXTRACTION OF HYDROCOLLOIDS FROM PLANT SOURCES: CHALLENGES AND EMERGING OPPORTUNITIES.

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Isolation and purification of hydrocolloids (thickeners and emulsifiers) from plant sources can be typically broken down into three distinct stages: The preparation of a food matrix for the extraction of the hydrocolloids; the extraction event itself; and the purification of the product. These procedures, as used today, are naturally differentiated from one source to another, due to the differing challenges involved in different plant materials. Moreover, the sequence of the processing can lead to end products with substantial differences in composition and properties.

However, the need for interlaboratory collaboration, for application on other plant matrices, for demo actions, and for the scaling-up of the production of such novel materials press the need for standardized products. A close examination of this group's existing work on a range of plant substrates (including okra fruit, orchid root, quince seed, grapes, winery waste, and olive processing waste) as sources of hydrocolloids, highlights patterns of optimal routes for the extraction of such materials, irrespective of the initial plant source. These trends and their relation to the composition and properties of the final products are discussed in terms of their potential to set-up standard protocols for the extraction of emulsifiers and thickeners from plant sources.