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## UTJECAJ METODA SUŠENJA NA ISKORIŠTENJE I FIZIKALNA SVOJSTVA SUHIH EKSTRAKATA KORE MANDARINE Citrus unishu INFLUENCE OF DRYING TECHNIQUES ON THE PRODUCT YIELD AND PHYSICAL PROPERTIES OF Citrus unishu PEEL DRY EXTRACTS

Marija Banožić, Krunoslav Aladić, Stela Jokić Josip Juraj Strossmayer University of Osijek, Faculty of Food Technology Osijek, Franje Kuhača 18, 31000 Osijek, Croatia

The product yield and physical properties of citrus peel dry extract, developed by two drying techniques: freeze drying and spray drying were investigated. Maltodextrin and Arabic gum were tested for their ability to serve as carriers for citrus peel extract. Obtained powders were evaluated for their moisture content, flow, solubility and color properties. Freeze drying gave almost 100% process yield, while spray drying yield was significantly lower (around 50%). On the other hand, the moisture content of dry extracts obtained with spray drying was lower than those obtained with freeze-drying. Both drying techniques significantly improved the flow and solubility properties of citrus peel dry extracts, while color changes were lower when freeze drying was used. Obtained results also showed that maltodextrin is a better carrier choice when spray drying is used, while for freeze drying Arabic gum is more suitable. Above all, those results could be used as guidance on the practical production of functional food powders delivered from by-products like selecting a suitable drying approach and carrier choice.

Keywords: spray drying, freeze drying, citrus peel

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