

PHYSICO-CHEMICAL CHARACTERIZATION OF OKRA HYDROCOLLOID EXTRACT

Dimopoulou Maria^{1,2*}, Ritzoulis Christos², Panayiotou Costas¹

*1. Department of Food Technology, ATEI Thessaloniki, 57400 Thessaloniki,
Greece*

*2. Department of Chemical Engineering, Aristotle University of Thessaloniki, 54124
Thessaloniki, Greece*

Keywords: Okra, polysaccharides, hydrocolloid, physicochemical characterization

ABSTRACT

Okra gum is a food-originating, low-cost anionic group, comprised principally of polysaccharides. This hydrocolloid has a significant potential in the field of food and pharmaceuticals. The aim of the present work was the extraction of the polymer from okra fruit (*Abelmoschus esculentus L.*) in different buffers (pH 4, 7, 10) and the characterization under various physico-chemical conditions. For this purpose, the produced materials were characterized using size exclusion chromatography (SEC) and Fourier transform infra-red spectroscopy (FTIR). The weight-average molar mass M_w and the radius gyration (R_g) determined using static scattering technique as well as the z-average diameter of the samples obtained by dynamic light scattering (DLS). Understanding and controlling such interactions can be the incentive for the exploitation of traditional food crops as basic structural components for high added value biomaterials.