

## Development of Low Calorie Jelly with Increased Content of Natural Compounds from Superfoods with No Added Sugar

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**Abstract :** The landscape of functional food is expanding very fast, due to the consumer interest for healthy natural products. Consumers nowadays demand healthy products that impart phytonutrients to encourage good health and well-being, prevent diseases, without sacrificing taste and texture. Candies are foodstuffs appreciated by all category of consumers. They are available in a range variety of forms (jellies, marshmallows, caramels, lollipops, etc.). Jelly is characterized by a gummy and chewy texture typically conferred by a hydrocolloid (gelatin, pectin). The purpose of this research was to obtain hypocaloric jelly (no added sugar) enriched with protein powder from acai, chia seeds and hemp, which are considered superfood. Peach and raspberry juice were used for obtaining functional jelly, due to the specific flavour, natural carbohydrate, natural pigments and vitamins (C, B1, PP, etc). Instead of classic hydrocolloids used in Romania for the industry of jelly, agar-agar was used in this study, due to its properties. Agar-agar is able to form gels in the aqueous medium, stronger than other gel-forming agents. High sugar concentrations or an acid environment (as is necessary with pectins) are not needed. In addition to its gelation properties, Agar-agar is considered to have important nutritional benefits, high content of fibre and has low calories. Six prototypes of jellies were obtained and evaluated by physicochemical, microbiological and sensorial analysis. For the textural profile analysis, the Brookfield CT3 Texture Analyzer, equipped with a 10kg load cell, was used. The results revealed that hypocaloric jelly can serve as a good source of bioactive compounds in the diet. The jelly is a convenient way of delivering potential health benefits of protein powder and agar-agar to a wide range of consumers.

**Keywords :** agar-agar, functional food, hypocaloric jelly, superfoods

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