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Short Communication

Properties of Flours and Starches from Bean Varieties Preparing Gluten-Free Pasta Formulation

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Gluten-free flour dispersions from four pulse market classes, including great northern, navy, red kidney (*Phaseolus vulgaris* L.), and garbanzo beans (*Cicer arietinum*) were evaluated and compared to wheat as a gluten-containing control. Their starches were isolated and therefore the relationships between flour behaviour and starch characteristics were studied. wheat fifty six percent and garbanzo thirty nine percent flours presented higher starch contents than the common bean beans between thirty percent which resulted within the development of stronger gel network structures. Rheology tests suggested that garbanzo and pea bean flours developed the strongest structures among the gluten-free samples included. Therefore, these were chosen to develop gluten-free pasta.

Dry beans are dicotyledonous seed of plants belonging to the Leguminosae family, which are widely cultivated all round the world thanks to their global adaptability and drought tolerance. Among these, common bean *L.* varieties like pinto, navy, great northern, kidney beans, and chickpea (garbanzo bean) are the foremost European Union classes grown within the US. Dry beans are rich in proteins and minerals and thought of an honest source of dietary fiber (Tharanathan R.N., Mahadevamma S. 2003). additionally, to their high nutritional value, health benefits like the reduction of the danger of cardiovascular diseases, obesity, and diabetes are related to their consumption (Sumargo F, Gulati P, Weier S A, 2016). However, the normal preparation method of beans, involving both long soaking and cooking periods, is seen as tedious and time-consuming by consumers, hence resulting in the underutilization of those beans. One alternative to enhance the consumption of dry beans is that the utilization of bean flours. bean flours are incorporated into composite flours to extend the resistant starch content and to enhance the protein quality cooking and sensory attributes like cooking loss (Gallegos-Infante J.A., Bello-Perez, N.E.

Rocha-Guzman. 2010). Appearance, and texture are simultaneously suffering from the addition of legume flours to semolina G. Giuberti, A. Gallo, C. Cerioli, P. Fortunati, F. Masoero. (2015), Bean flours have also been utilized to develop gluten-free (GF) foods like pasta during which the nutritional quality is enhanced (P. Belton. 1999) wheat products, these GF goods show different texture and cooking quality and are significantly suffering from the sorts of beans utilized their major components on the functional characteristics of flours, functional properties have been reported. as an example, the massive amylose content of legume starches leads to high gelatinization temperatures, restricted swelling, and little or absent breakdown viscosity values. Bean flours and their isolated starches were determined employing a Brabender Micro Visco-Amylo-Graph.

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