

## Impact of Artichoke Powder on Pasta Technology and Quality

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**Introduction.** In recent years many countries has increased pasta production and its consumption. The market of pasta products of dietary and functional purposes occupies a small segment that does not exceed 1%; therefore the urgent task of pasta industry in the last decade is the increase in the production of this product. Food that is fortified with dietary fibre possesses special attention by consumers. Nowadays there are recipes of pasta enriched by dietary fibre of cereals (bran, whole wheat flour), with vegetable powders with preparation of inulin [1]. Artichoke powder is a valuable source of dietary fibre, but its use for making pasta has not been studied yet. A high content of polysaccharides, a wide range of minerals, organic acids and vitamins are confirmed by many studies. Inulin is the most valuable component of artichoke. Medics proved that inulin reduces the level of blood sugar in patients with diabetes mellitus increases the body's immune status [2]. The aim of the research is the development of pasta technology with artichoke powder. In this work the impact of artichoke powder on the quality of pasta and dough preparation is studied.

**Materials and methods of research.** In this work the impact of different doses of artichoke powder (2, 4, and 6%) by flour weight on pasta quality is studied. Dough with humidity 34% was prepared on a laboratory press. The products were cooked using premium flour. The number of crumbs in dough, pressing speed and productivity of pasta press by conventional methods were determined. The quality of pasta was characterizes by organoleptic characteristics, acidity, strength and cooking properties by GOST 14849-89.

**Results.** It is established that artichoke powder affects the colour of products; it becomes darker with dosage increasing. Products with dosing 2% have the best colour – creamy. Products with dosing 2–4% have a smooth surface, glassy fracture and do not differ from the control sample. Minor cracks have products that contain 4–6% of artichoke powder, only with a dosage of 6% mealy fracture appears.

Acidity of the products increases to 0.2–0.4 deg with increasing dosage of artichoke powder, but it does not exceed the requirements of the standard and does not affect on the taste of the finished products.

Factor of the products strength with artichoke powder increases in comparison with a control sample and is the best for 2%.

Factors extension mass and volume are almost identical comparing with a control sample.

The amount of solids that have transferred into cooking water increases with increasing dosage of artichoke powder and it is a negative factor.

**Conclusions.** Powder improves the strength of pasta and cooking quality with a dose of 2% by flour weight. The use of the powder affects dough structure, there are more small crumbs and it generally produces a reduction in the speed of the press.

### References

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