

INTRODUCTION

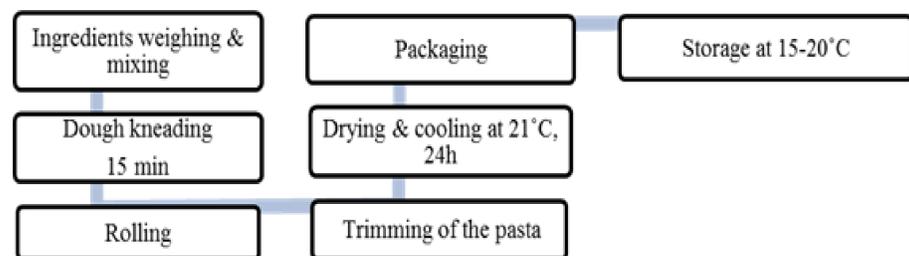
Ipomoea batatas L. or sweet potato (SP) is extensively cultivated for its health-promoting chemical constituents. Orange-fleshed potatoes are low in fat and cholesterol, but rich in dietary fibers, vitamins C, B₂, B₆, E, phenolic acids, β-carotene and minerals such as K, Mn, Cu and Fe. Therefore, sweet potato is a valuable raw material in obtaining foods with a high nutritional value.

AIM

The purpose of this work was to create a new assortment of Tagliatelle using sweet potato flour in order to increase the content of β-carotene in the final product.

MATERIALS AND METHODS

- SP were cut into thin slices and dried at 40°C for 16 h; then slices were cooled down at room temperature and grounded to the same granulation as of wheat flour.
- Obtained SP flour replaced *Triticum durum* wheat flour in different amounts: 18%, 23%, 29%. Tagliatelle making process was realized as follows:



- For SP flour physico-chemical parameters were analyzed (umidity, acidity and ash), Tagliatelle were subjected to the boiling test (10 min), the Total Carotenoid Content (TCC) was evaluated for pasta before and after boiling.

CONCLUSIONS

The new assortment of Tagliatelle with sweet potato flour addition was designed. The boiling test highlighted that recipe with 18% SP flour is technological applicable: pasta retains its shape, elasticity and does not stick. The increasing the percentage of SP flour leads to products with inappropriate quality parameters. Cooking affects TCC value but, Tagliatelle still contain β-carotene due to the rich β-carotene content of sweet potatoes. In this context, the use of sweet potatoes in the pasta production would help to increase vegetable intake as well the nutritional value of food.

REFERENCES

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2. Teow, C., Truong, V., McFeeters, R., Thompson, R.L., Pecota, K.V., Yencho, G.C.: Antioxidant activities, phenolic and β-carotene contents of sweet potato genotypes with varying flesh colours. *Food Chemistry*, **2007**, *103*(3), 829-838.

RESULTS

Physico-chemical values of SP flour were compared with values of the same parameters of *Triticum durum* wheat flour (DW). The low humidity of SP flour ensures a good storage ability.

During the boiling test, Tagliatelle with 23% and 29% SP flour did not keep their shape, moreover, were sticky, while pasta with 18% SP flour addition maintained its elasticity and shape. For TCC analysis was used pasta with 18% SP flour.

TCC of uncooked (Upasta) and boiled (Bpasta) pasta were compared with raw (RSP) and boiled (BSP) sweet potatoes. As is shown in the Fig.2 the TCC value of pasta and SP had a downward tendency as a result of thermal processing. The TCC value of uncooked pasta was $96.5 \pm 0.5 \mu\text{g/g}$, while in boiled ones was $38.8 \pm 0.6 \mu\text{g/g}$. In raw SP the amount content was $157.9 \pm 1.8 \mu\text{g/g}$, and $137.9 \pm 1.3 \mu\text{g/g}$ in boiled one, respectively.

