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Obtaining and characterizing of some spicy sauces from figs

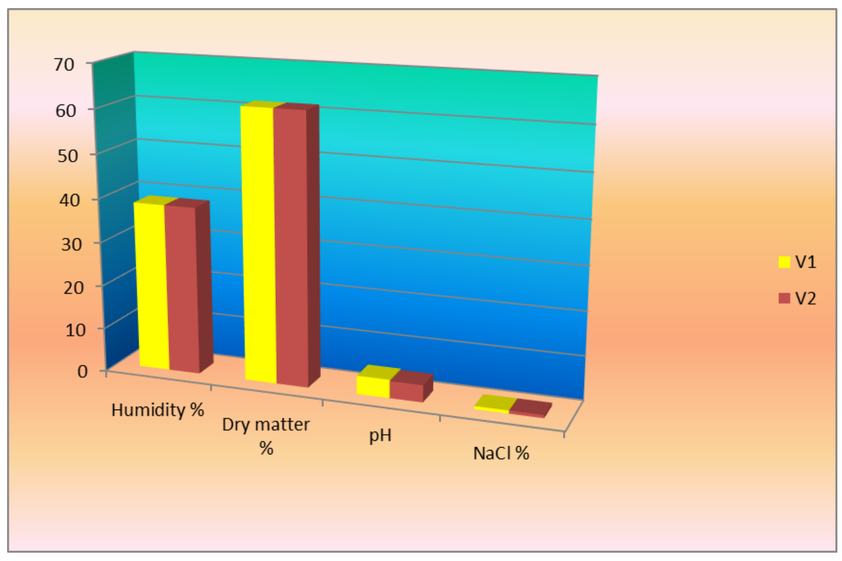
Drugă Mărioara[1], Moldovan Camelia[1], Dumbravă Delia Gabriela[1], Mișcă Corina Dana[1], Hădărugă Nicoleta-Gabriela[1], Poiană Mariana Atena[1], Velciov Ariana Bianca[1], Rădulescu Laura[1]

[1]University of Life Sciences „King Michael I" from Timisoara, Faculty of Food Engineering, Aradului Street no. 119, 300645, Timisoara, Romania

Abstract

Figs are the most alkaline fruits known and have a complex nutritional profile, being rich in micronutrients and vitamins and relatively low in calories. The aim of the study was to obtain and characterise from sensory, physico-chemical and nutritional point of view the sauces made from figs and other auxiliary materials: onion, ginger, mustard, lemon juice/balsamic vinegar (V1 and V2), brown sugar and spices such as black pepper, cinnamon, chili and cloves. The sauces are well-bound, finely textured, with a well-appreciated taste and aroma. For both variants of sauces some of the physico-chemical parameters were similar (humidity: 38,4%, dry matter 61,6%, salt 0,7%) and some were different (pH 4.2 in V1 and 3.9 in V2). Polyphenols range between 69.5±0.9 (V1) and 71.7±0.2 (V2) mg GAE/100g , antioxidant capacity following the same direction (72.2 – 79.8 mg Trolox/100g). Energy value was 230 cal/100g product.

The aim of this work was to obtain an innovative product, some spicy sauces, in which the main ingredients are figs, and other auxiliary materials, such as onion, ginger, mustard, brown sugar and spices and lemon juice (V1) or balsamic vinegar (V2) and to characterize them from sensory, some physico-chemical and nutritional points of view. Two versions of sauces were obtained, the difference between them being the addition of lemon juice or balsamic vinegar, respectively. From a sensory point of view, the consistency, color, smell, taste and aftertaste were analyzed to see the degree of acceptability by consumers. Also, humidity, dry mater, salt, acidity, the polyphenol content and antioxidant capacity of the product were analyzed and its nutritional value was calculated.



Physico-chemical parameters

Polyphenol content and antioxidant capacity and energy values of the two sauce variants

Parameter	Variant 1	Variant 2
Polyphenol content, mg GAE/100g	69.5±0.9	71.7±0,2
Antioxidant activity (mg Trolox/100g)	86.52±0.24	86,82±0,14
Energy value (cal/100g)	230	230

Figs sauce

Regarding the sensory analysis of the fig sauces, all the characteristics analyzed were well appreciated by the panelists, with numbers averaging above 4. The taste and aftertaste of the V1 variant were the best scored, with averages of 4.8, probably due to the addition of lemon juice, instead of balsamic vinegar, which has a pungent smell and taste.

Conclusions

Spicy fig sauces are pleasant, aromatic and all the characteristics analyzed were well appreciated by the panelists, having a very good degree of acceptance for consumption.

The obtaining technology is simple and can be done at home. Polyphenols, antioxidant capacity and the other analyzed parameters were quite similar in both variants, except for polyphenols and acidity, which were higher in the case of variant V2, to which balsamic vinegar was added instead of lemon juice. Although they are thermally processed products, the obtained values recommend them as an important source of antioxidants.

The calculated energy values of the sauces are relatively low, and can be consumed by any age group.