POSSIBILITY OF USING MIXTURES OF SALT AND SUNFLOWER SPROUTS IN CULINARY

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Abstract: In our market today there is a wide range of different spices for different food groups. Salt is most frequently used to form the final taste of the dishes in cooking. The use of this ingredient in the mix with germs of cereals helps to enrich dishes with vitamins, micro and macro elements, minerals etc.
Keywords: iodized salt, sprouts, sunflower seed sprouts

I. Introduction

Germs are considered irreplaceable ingredients for those who want a long life and especially healthy. They are defined as any natural products obtained from edible seed germination, chemically untreated, in strict hygiene conditions. Not heat-treated seeds. They are eaten raw, because otherwise, they no longer retain the same properties and it would be a shame to lose the vitamins, minerals and enzymes. Another advantage is that germs can be underlying the year round, may occur in any season, regardless of climatic conditions, geographic regions, etc. The composition of sunflower germs contains: salt and sunflower sprouts.

The usual form of sodium chloride that is used in food is called salt. It is used as spice, and in some cases is used as a preservative. Regardless of the fact that daily consumption of salt in the diet should not exceed 3 grams (if relying essentially increases the risk of heart attack, stroke, etc.) this ingredient is used daily by different social strata, etc.

II. Materials and methods

Preparing the mixture of sunflower seed sprouts and salt were carried out in two stages:

1 stage-sunflower seed germination,

2 stage - mixing components.

2.1. Materials for research

The surveys that were used while conducting: sunflower harvest of 2011 that comply with GOST 22391-89 normative document, iodized salt and iodized salt GOST 13830-97 GOST 51575-2000 for food from the manufacturer LLC "stalagmites". [4,5,6]

2.2. Germination method

Sunflower Seed germination was carried out in accordance with the patent №: 2428029 which consist of soaking and regular ventilation during germination of seeds.

- Sunflower seeds germination was carried out at home and consisted of the following basic steps:
- Wash the seeds of dust and dirt,

- arrange in a bowl for soaking,
- Cover the seeds with water for 12 hours in a normal room humidity and stable temperature (Fig. 2).
- get washed seeds in water (Fig. 3)
- arrange in an even layer (Fig. 4). Repeat this procedure 3 times daily and control germ growth (Fig. 5).

Fig. 2 swelling

Fig. 3 wash under running water

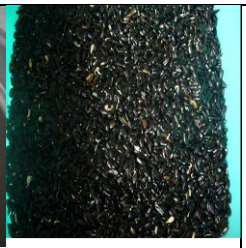

Fig. 4 seed layer

Fig. 5 Measurement germs

To see the evolution of change and organoleptic changes of mixtures, were chosen 3 samples of sunflower seeds germinated: 3rd, 5th and 7th day of germination (Fig. 6).

Fig. 6 The 3 days of germination

A 5 day germination

A 7 day germination

2.3. Method of preparing the mixture

Sunflower seeds during long storage lose their basic organoleptic properties. To maintain the quality of germs we decided to use a mixture of sunflower sprouts and salt, which in this case has two functions: as a spice and as a preservative. To prepare the mixtures we used two kinds of salt, which most often used in cooking: iodized salt and iodized salt in the following proportions: germ: salt in the proportion of 1:2 and 1:3.

Peeled sunflower seeds, with salt were weighed respecting proportions (Fig. 7). seeds were chop until a homogenous mass then evenly distributed composition on a white sheet in a thin layer (Fig. 9). Samples were dried in an oven at maximum temperature of 45 0C, because at this temperature all the nutrients are kept at a maximum (Fig. 10).

Fig. 7 Weighing

Fig. 8 Blending

Fig. 9 Arrange layer

Fig. 10 drying samples

After drying the samples were left at room temperature 18-20C for 20-30 minutes, to determine the temperature of the mixture and to evaporate the excess of moisture. During drying the mixture strengthens, that's why after drying; it was ground in the mill.

III. Results and Discussion

The present work was prepared a mixture of sunflower seeds germ iodized and iodized salt. After all preparation procedures mixture was conducted a survey to select a mixture of high organoleptic aspects.

Questionnaire for the survey was developed according to Laboratory methodical guide of the discipline "techno-chemical control of catering products," namely annex of the score, then guided the participants in the survey and evaluating the quality of the samples examined. Proposed questionnaire was attached to RAL color table, for making it easier to appreciate color type of the obtained mixture.

Questionnaires based on the average score was calculated for each of the samples under study (Fig. 11).

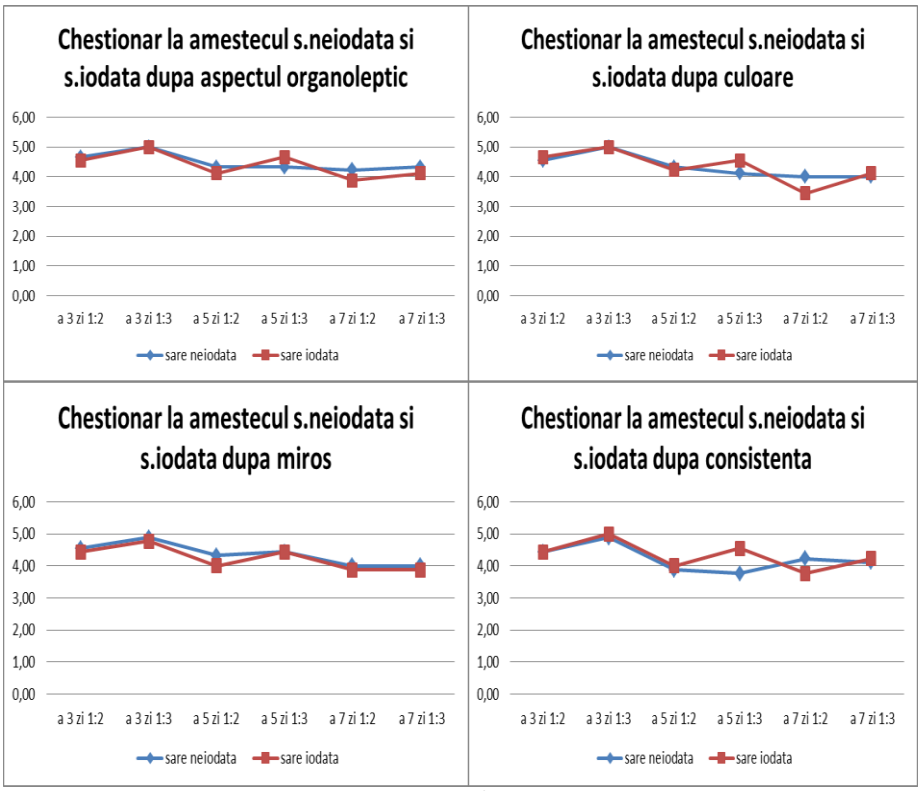

Fig. 11. Survey results from sensory aspect

Analyzing all graphs above, we conclude that the sample mixture of salt (simple salt and iodized one) and sprouts (3 days) is actually the most successful in terms of sensory evidence and the best organoleptic properties.

In order to see the possibility of using analyzed mixture at gastronomy, we added in the recipe instead of the simple salt, mixture made by us. To use all the useful properties of the mixture we choose a recipe that does not require heat treatment and the seasoning process is carried out at the end of the cooking process. In this case we chose the recipe № 94 Fresh cabbage salad recipe (Fig.12).

Fig. 12. Coleslaw mixed

Questionnaire for the survey was developed with technological card of cabbage salad with organoleptic indicators that ought to satisfy preparation and annex score, after the survey participants were led to appreciate the quality.

For the tasting three samples were prepared in the presence of witness (basic recipes) and other two had a mixture of iodized salt seasoned with sunflower sprouts and simple salt with sunflower sprouts. Results were full marks in both samples.

Conclusion

The research mixture of salt and sunflower sprouts in different proportions has concluded that the product obtained can be used in cooking, having several benefits: enriches final product with vitamins, micro and macro elements, minerals etc.

In order to preserve biological and chemical worth recommend using the mixture for seasoning preparations and cold dishes that are not subjected to heat treatment.

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