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RESEARCH ON INFLUENCE OF VEGETABLE RAW MATERIALS ON PROPERTIES AND QUALITY OF SESAME HALVA

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The purpose of the article is to develop of a new formulation of sesame halva with the introduction of watermelon seeds, as the plant, which will enrich the halva with beneficial micro-macro elements, vitamins, as well as increase food and biological value of the product. Application of watermelon seeds help reduce the cost of the confection, and improve the efficiency of waste-free production. The author considered and analyzed the mineral, food composition, as well as physical and chemical characteristics of watermelon seeds.

Keywords: halvah, watermelon seeds, confectionery, benefit, herbal supplements

ИССЛЕДОВАНИЕ ВЛИЯНИЯ РАСТИТЕЛЬНОГО СЫРЬЯ НА СВОЙСТВА И КАЧЕСТВО КУНЖУТНОЙ ХАЛВЫ

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Целью исследования является разработка нового состава кунжутной халвы с введением семян арбуза, как растения, которое обогатит халву полезными микро- и макроэлементами, витаминами, а также повысит пищевую и биологическую ценность продукта. Применение семян арбуза поможет снизить стоимость кондитерского изделия, а также повысить эффективность безотходного производства. Авторами рассмотрены и проанализированы минеральный состав, пищевая ценность, а также физические и химические характеристики семян арбуза.

Ключевые слова: халва, арбузные семечки, кондитерские изделия, растительные добавки

Confectionery is one of the fastest growing sectors of the food industry. Over the past four years, the consumption of confectionery products increased from 8.5 kg to 10 kg per person per year. Made in 2000. volume production of confectionery 1,640,000. tons provides a level of consumption is much lower level of consumption achieved in 90 y.- 19.5 kg : year. That is, the potential market size exceeds the current at least two times. If we take the total production of confectionery products 100%, the production of sugar confectionery 45%.

One of the most preferred oriental delicacies in Kazakhstan is halvah. To date, there are hundreds of types of halva, a lot of recipes and methods of cooking. Halva occupies 1.8% of the total share of sugar confectionery. Various types of halvah and products such as soft candy: nougat, delight, sherbet. Production of the sweets is considered the most complex and requires highly skilled employees. In general, the market trend of increasing interest in healthy eating.

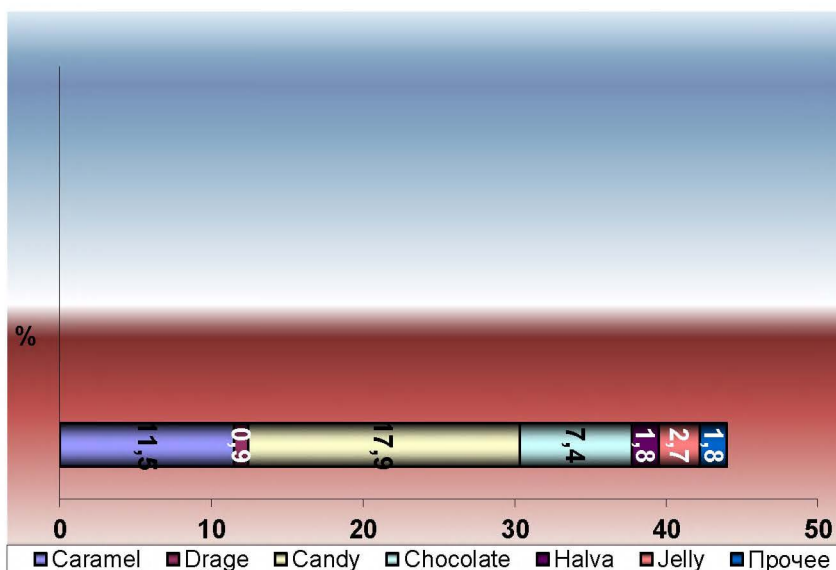


Figure 1. Chart production of confectionery products. Sugar confectionery

Currently conducted organoleptic and physico-chemical studies on the subject of enrichment sesame halva using herbal supplements, which were used as a watermelon seed. The tendency of the influence of watermelon seeds on indicators of fat, sugar, ash and moisture.

Table 1

Performance of standard and experimental data

№	Name of mass fractions and physical-chemical parameters	GOST % (g)	Experimental data, %
1.	Fat	28.1- 29,9	29.0
2.	Sugar	50-55	56.0
3.	Ash content	2,9	3.0
4.	Moisture	4.0	3,1

Based on the data table 1 shows that the desired result is reached by reducing the moisture and ash content increase, indicating enrichment of halva vitamins and macro-microelements, as well as normal stabilized fat and sugar increased slightly, as is characteristic of confectionery products. The relationships of all components in the new recipe sesame halva, and nutritional value.

Nutritional value of sesame seeds and watermelon seeds

№	Name of component	Sesame seeds	Watermelon seeds
1.	Nutritional value	524kcal	601kcal
2.	Ca	1474mg	54 mg
3.	Mg	540 mg	515 mg
4.	Na	75 mg	99 mg
5.	K	497 mg	648 mg
6.	P	720 mg	755 mg
7.	Fe	16 mg	728 mg
8.	Zn	-	10,24 mg
9.	Cu	-	686 mg
10.	Mn	0,36 mg	1,614 mg
11.	B ₁	1,271 mg	0,19 mg
12.	B ₂	-	0,145 mg
13.	B ₃	-	0,346 mg
14.	B ₆	-	0,089 mg
15.	B ₉	-	58mkg
16.	PP	11,1 mg	17,8 mg
17.	protein	19,4 g	28,33 g
18.	fat	48,7 g	47,37 g
19.	carbohydrates	12,2 g	15,31g
20.	Ash content	5,1 g	9,94g
21.	water	9 g	5,05g

From the comparison table 2 shows that the nutritional value of watermelon seeds larger than sesame thus watermelon seeds are excellent products an additive in halvah.

Conclusions: The results of studies on the chemical and physic-chemical composition. The drawback of this study is incomplete account of all influencing factors in the study of metal impurities, because processing is performed at the plant watermelons automatic equipment. In turn, this situation is likely to cause a reduction of prediction accuracy. Therefore, further studies using these parameters are certainly relevant.

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