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Use of Effective Food Additives to Increase the Food Value of National Bakery Products

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ABSTRACT: Qualitative indicators and physico-chemical characteristics of effective food additives provide improved properties of national bakery products. By creating graphical dependencies of the influence of particle size distribution on the properties of raw materials, an improvement in the indicators of the final product was achieved.

KEY WORDS: national bakery products, food additives, particle size distribution, technological capabilities, quality and physico-chemical characteristics.

I. INTRODUCTION

In the state policy in the field of healthy nutrition of the population of the Republic, special attention is paid to the preservation and strengthening of the health of the population, the prevention of diseases associated with malnutrition [1-3].

The development of this direction based on the achievements of world and domestic science in the field of food production is aimed at increasing the efficiency of modern technologies, the deep processing of raw materials, including secondary resources, to produce new food ingredients with functional properties and the development of food products balanced in accordance with physiological needs [4-6].

At the same time, new food products, especially national bakery products, should have, in addition to increased nutritional value and functional properties, organoleptic characteristics acceptable to most consumers.

This shows the relevance of the use of food additives and flavors with desired properties in the formulation of national bakery products [7-9].

The purpose of the work is aimed at the use of effective food additives and flavors with predetermined nutrient composition indicators to increase the nutritional value of national bakery products.

The objects of study were baking wheat flour [10], national bakery products [11,12], food powders [13,14] and sugar content products [15]. Powders and sugar-containing products were obtained by processing crops [15,16].

Research Methods. The study of the technological properties of raw materials, their chemical composition, physico-chemical properties of semi-finished products, finished products, safety indicators of raw materials and finished products was carried out by standard and generally accepted methods [17, 18].

Results and discussion. The granulometric composition, as well as the water-binding and fat-binding abilities of raw materials, largely determine the structural and mechanical properties of semi-finished products and finished products.

Graphical dependences of the effect of particle size distribution on the water-binding, fat-binding abilities and the falling number of raw materials are shown in Fig. 1 and Fig. 2.

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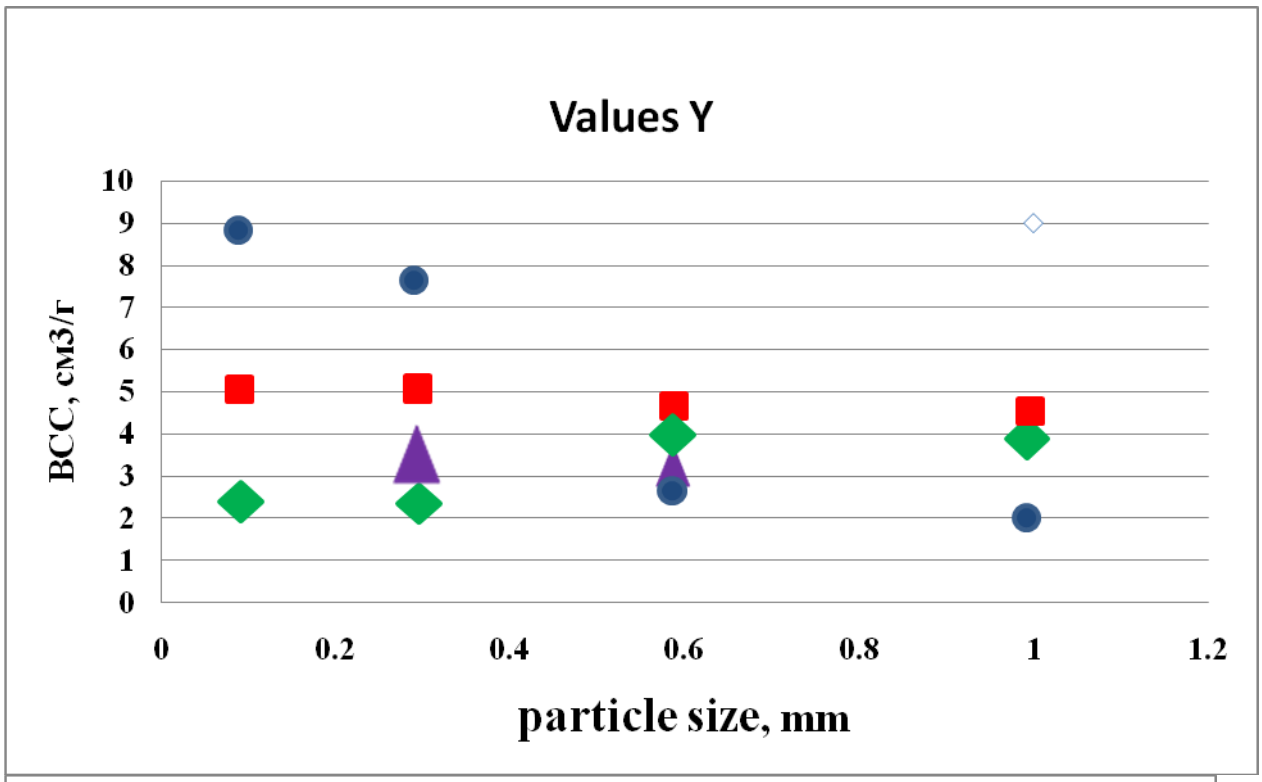

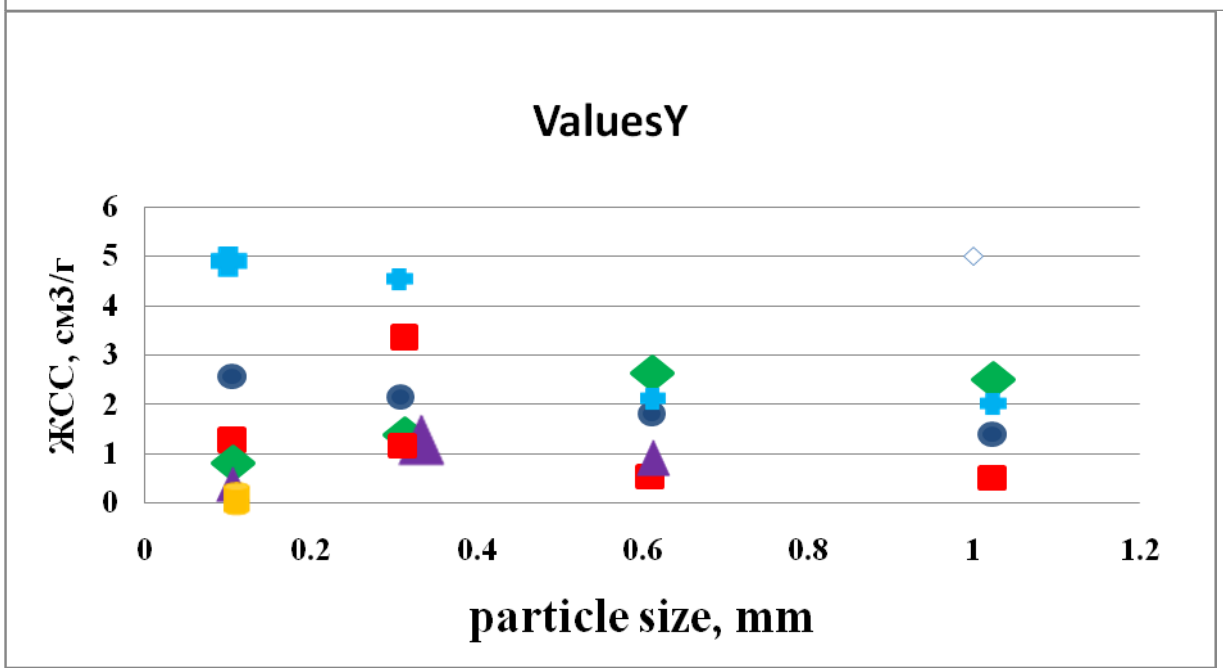

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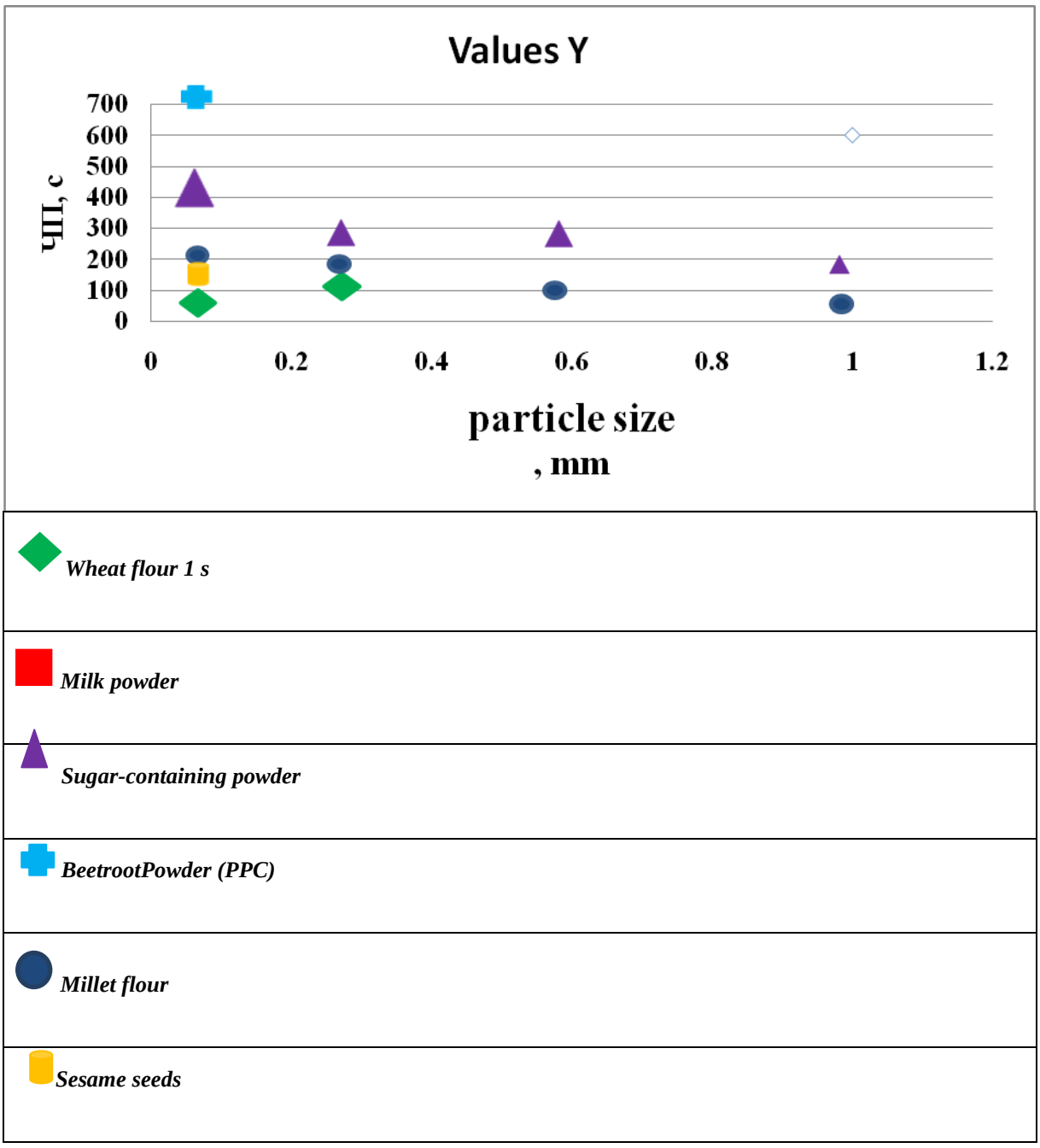

Fig. 1: Dependence of water-binding, fat-binding ability and drop number on the particle size distribution of raw materials for multicomposite flour mixtures.

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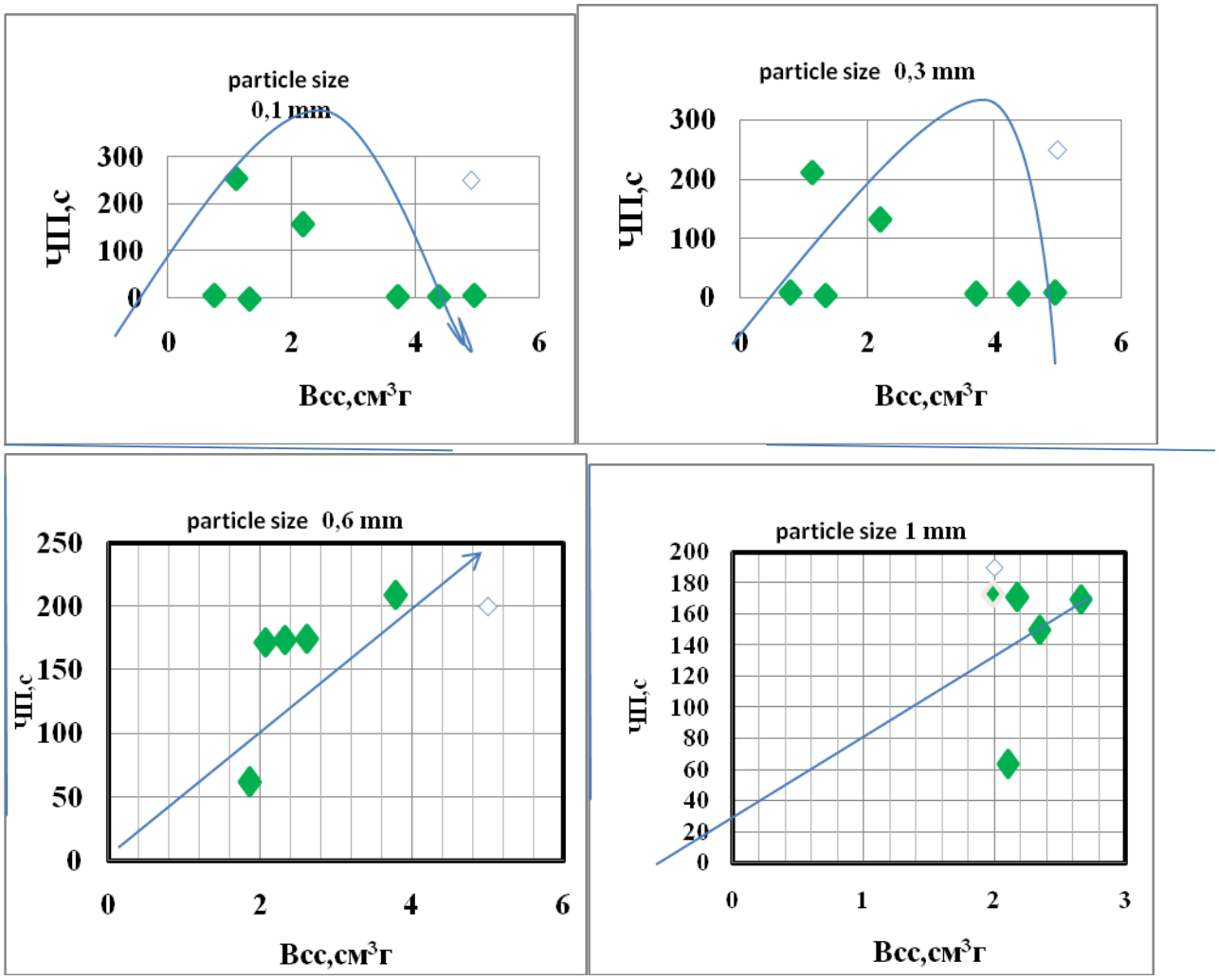

Fig. 2.Dependence of the falling number of raw materials on their water-binding ability and particle size distribution.

It was established that the water-binding and fat-binding abilities, as well as the drop number, have an inverse linear dependence on the particle size of the raw materials (Fig. 1).

The dependence of the number of drops on the water-binding capacity is described by linear dependences for particle sizes of 0.6 and 1 mm and more complex (non-linear) with a decrease in particle size (Fig. 2).

By the indicator of the number of falls, one can judge the change in the indicators of the water-binding and fat-binding ability of raw materials.

Thus, the falling number of raw materials forms the quality of semi-finished products and finished products.

Conclusion The established indicators of the studied food additives and flavors allow them to be used to improve the quality indicators of national bakery products.

REFERENCES

1. AurmanL.Ya. “Technology of baking production” St. Petersburg 2005, p. 278.
2. Suvorov I.V., Shatnyuk L.N. Health-food products enriched with micronutrients // Food Industry. 2008. - No. 10. - P. 12.
3. KoryachkinaS.Ya., Labutina N.V., Berezino N.A., Khmeleva E.V. "Control, bakery production" Eagle 2010, -p. 210.
4. Ceglinska A. Wplywwybraychpolepszaczynawlasciwosciciasta l jacoscotrzymanychwyrobow. -Warszawa-.Wydaw.SGGW, 2005.S. 78.
5. Lehmann I. Erfolgreich und sozialvertraglichwirtschaften-einWiderspruch? // LandlicherRaum. - 2005. - Vol. 56, No. 3.-P.
6. Tsyganova TB "Technology of baking production" Moscow 2002. P.428.
Pashchenko L.P., Zharkova I.M. “Technology of bakery products” Kolos 2006

ISSN: 2350-0328

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8. Nechaev. A.P., Shub I.S., Anoshina O.M. and other food production technologies. Ed. A.P. Nechaeva. M .: Kolos, 2005. - S.368-369:
9. Pashchenko L.P. Biotechnological basis for the production of bakery products. M .: Kolos, 2002, p. 248.
10. Vasyukova AT, Puchkova F. "Modern technology of baking" Moscow 2011, -p. 228.
11. Apulcina E.V., Polandova R.D., Shlelenko L.A. Bakery products for schoolchildren // Bakery of Russia. 2009. - No. 2. - P. 14.
12. Polandova R.D. The use of food additives in bread baking // Agribusiness of the South of Russia. 1999.- No. 11.- S.22-24.
Nikitin I.A. The use of amaranth flour and modified compositions based on it in bread technology. Text: dis. .Cand.tech. sciences. Voronezh, 2005 .-- 186 p.
14. Nikiforova T.A. Promising food additives for the production of high quality products // Food industry. 2007. - No. 11. - S. 8-9.
15. Puchkova L.I. "Laboratory workshop on technology" baking production St. Petersburg 2004, p.124.
16. Romanov A.S., Davydenko N.I., Shatnyuk L.N., Matveeva I.V., Poznyakovsky V.M. “Examination of quality bread and bakery products and safety” Novosibirsk 2005, p.178.
17. Tylkin VB, Kononenko I.E., Dmitrieva A.B. Commodity research of food products.M .: Economics, 1980. - P.38.