

INFLUENCE OF DEGREE OF POLYMERIZATION RAFTILINE CONTAINING RAW MATERIALS ON WATER ABSORBING ABILITY OF A FLOUR AND RHEOLOGICAL CHARACTERISTICS RYE-WHEATEN DARK AND THE WHEATEN DOUGHS

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For working out of technology rye-wheaten dark and functional purpose white bread in a bread compounding bring a food fibre – raftiline and raftilose – the polymers constructed of links angidrofruktofuranoze, connected in position β (2→1) and polymerizations different from each other by degree, solubility and a chemical compound.

Water absorbing ability of a flour defined in samples with entering restored raftiline containing raw materials HP, GR and P 95 in number of 3 % (initial raw materials) to weight of a flour for what raftiline mixed with water in temperature 30 °C in the ratio 1: 3, then mixed in a current of 5 minutes and stood not less than 1 hour.

Entering raftiline containing raw materials in the restored kind in number of 3,0 % to weight of a flour leads to change of water absorbing ability of the dough. At definition of water absorbing ability of a flour rye, it is established that at use of raftiline of mark Beneo GR and raftilose Beneo P 95 water absorbing ability doesn't change. Use of raftiline Beneo HP leads to increase in water absorbing ability (WA) torments on 2,7 %.

At research of a flour wheaten baking the premium, it is established that at entering HP water absorbing ability (WA) torments increases by 2,6 % in comparison with the control sample, at entering of raftiline GR WA of a flour doesn't change, and entering raftilose Beneo P 95 reduces WA wheat flour on 2,3 %.

Proceeding from the received data it is possible to draw a conclusion that WA torments changes depending on degree of polymerization of a brought component. So, at use insoluble in water HP, having the greatest degree of polymerization and capable to connect water in quantity several times exceeding its own weight, WA torments increases on 2,6 – 2,7 %. It can be caused ability of raftiline to form three-dimensional cellular structure in which cells the moisture which has not gone on formation of the test is kept.

At use GR, WA torments doesn't change, as raftiline of the given mark isn't capable to form strong three-dimensional structure in which cells the moisture is kept, but thus, possessing degree of polymerization from 10 to 14 units, raftiline doesn't show properties, characteristic to low-molecular carbohydrates and doesn't increase a share of a liquid phase in the dough.

At entering P 95, WA torments decreases on 2,3 % as properties of the low-molecular carbohydrates in this case are shown, capable to raise a share of water-soluble fraction in the dough and by that to dilute it.