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THE INFLUENCE OF THE TYPE OF PACKAGE ON THE QUALITATIVE INDICATORS OF FROZEN STRAWBERRIES

The chemical composition of fresh and frozen strawberries of varieties Festivalnaya romashka, Dukat, Honey and Polka was investigated, which were kept in different types of package: mesh, polyethylene bags and plastic containers for six months at the temperature minus 18 ° C. Strawberries stored in mesh bags, served as a control in the experiment. During the research, weight loss and the chemical composition of berries: soluble solids content, sugar content, organic acids and ascorbic acid content were measured.

Content of soluble solids at the level of 7,7 – 8,2%, sugars – 5,5 – 7,2%, organic acids – 0.7 – 1.2% and ascorbic acid – 63,0- 94.6 mg / 100g were observed in strawberries.

As a result of freezing, the loss of production mass on 1,9 – 4,6% was marked. Strawberries of Honey variety was characterized by the lowest level of losses – 1.9%.

As a result of the freezing process, a significant reduction of soluble solids – by 0.4 – 0.9% was observed, which amounted 5,0 – 11,0% and ascorbic acid – by 17,2 – 52,5%, and increase of the level of sugars in berries on 3,4 – 9,8%.

During storage of the frozen strawberries for three months in mesh bags, weight loss was set at the level of 4,5 – 8,9%, while in the polyethylene bags and plastic containers it was much lower – 0,41 – 0,74% depending on variety and type of packaging.

Storage of frozen berries for three months resulted in increase of soluble solids level in them by 3,3 – 10,9%, which is obviously due to hydrolysis of polysaccharides. At the same time in the berries of all variants of the experiment were observed loss of sugar – by 6,3 – 18,3% and increase of the level of organic acids by 5,8 – 13,1%. Vitamin value of frozen strawberries as a result of storage decreased by 8,4 – 29%, except of berries of variety Polka, in the last one its increase by 9,6 – 21,2% was found, which is obviously due to the restoration of dehydroascorbic acid.

During the storage, a significant impact of the type of package on the changes of the chemical composition of frozen berries was observed: significantly big losses during storage of berries in mesh bag was fixed: by 2,3 – 6,9% of sugars and by 6,6 – 12,4% of ascorbic acid.

It should be noted that the loss of the components of the chemical composition of berries stored in polyethylene bags were at the level of loss of berries stored in plastic packaging or exceeded them insignificantly.

Thus, storage of strawberries in polyethylene bags reduces the weight loss of products and components of the chemical composition. Among the studied varieties of strawberries, variety Honey preserved its quality in the best way.

Key words: freezing, strawberry, variety, package, chemical composition, mass loss.