METHOD OF INVESTIGATING QUALITY OF CUTTING VEGETABLE RAW MATERIALS AND DETERMINATION OF THE FACTORS OF INFLUENCE

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The method of determination the quality of cutting vegetable raw materials in the disk-type machines is presented in the article. The offered method suggests the evaluation of the quality of cutting using a combined method: sensory and instrumental. It allows to execute the evaluation objectively, quickly and without substantial expenses. It allows to execute the evaluation of the quality of cutting with machines which are used by the enterprises of restaurant industry.

The probed products are vegetables; a cutting form is slices; interval of cutting speeds – from 200 to 1200 rev/min; cutting thickness – from 1mm to 6mm. The experimental setting is a disk-type vegetable cutter with the adjustable speed of cutting.

It is suggested to execute the evaluation of the cutting quality according to five indexes: roughness of a cut, roughness of face-end surface, accordance of thickness and cutting form with the given settings, amount of spoilage, losses of juice while cutting. Every index was rated on a scale of 1 to 3: 1 point was assigned to the products of high quality, 0,5 point was assigned to the products of satisfactory quality, consumer properties of such products are reduced, but they are suitable for further treatment, 0 points were assigned to the products which were unsuitable for the further use (spoilage).

The research results have been analysed and presented as tables. It allows to choose the optimum modes of cutting for different raw material in accordance with the indexes of quality.

The dependence of cutting quality on the speed of cutting and thickness of the slices was investigated and analysed. It has been proved that with the increase of cutting speed and the decline of thickness of slices the amount of defective products increases. The dependence of cutting quality on the structure of the product and its drynesses has been determined. It is certain that the optimum interval of speeds for cutting vegetables into slices from 1mm to 4 mm thick is the interval of 300–600 rev/min. Thus the correlation «quality of cutting – spoilage» remains optimum.

**Keywords:** cutting, indexes of quality, cutting speed, cutting thickness, green-stuffs.