THE NEW WORD IN THE TECHNOLOGY OF MANUFACTURING PRODUCTS WITH THE USE OF MODERN EQUIPMENT AT CATERING ENTERPRISES


The new method of deep processing of fruit and vegetable raw materials without the use of low temperatures is proposed and developed. It is alternative to cryogenic processing and based on complex effect of steam treatment and fine-dispersed grinding. The authors applied the new generation of modern highly effective equipment (steam-convective oven (Italy), activator – disintegrator (France) which are used at catering enterprises that allows to use biological potential of raw materials more completely (2…3 times higher than in start raw materials).

It is found that during the deep processing of carotene-containing vegetables (carrot and pumpkin) with the use of modern steam-convective equipment the fermentative processes occurred with less intensity than during traditional method of heat treatment – blanching by dipping into the boiling water. Quantitative value of maximal fermentative activity is 2–4.5 times less for polyphenol oxidase and 3 times less for peroxidase during the steam-convective processing of carotene-containing vegetables than during the blanching. It is shown that full inactivation of oxidative ferments during heat treatment of carotene-containing vegetables in steam-convective oven appeared earlier than during blanching. It occurs in 20 minutes, which 10–15 minutes earlier than during blanching. Full inactivation of oxidative ferments during blanching of carotene-containing vegetables appeared in 30–35 minutes. It is specified that the complex use of steam-thermal processing gives possibility to obtain pureed, the quality of which achieves the quality of puree obtained according to the concentration of β-carotene: it is 2.5…3 times higher during steam thermal processing and 2.8…3 times during cryogenic processing.

Key words: deep processing, herbal raw materials, steam-treatment, fine-dispersed grinding, steam-convective oven.