To improve processing of fruit and berry raw materials, it is supposed to implement technical re-equipment of the enterprises basing on their fitting out with efficient and reliable equipment which has high productivity, economic efficiency and reliability, that will allow considerably excluding damage to and loss of products by means of reducing duration of processing and low-temperature conditions of their heat treatment.

Heating of puree-like products, in which the heat is distributed mainly due to thermal conductivity, till boiling with further concentration and contact drying is a difficult technical task.

The purpose of the article is intensification of technological equipment for implementation of the processes of concentration and drying for production of semi-finished products from fruit and berry raw materials.

The author has improved the process of concentration of fruit puree in the rotary-film evaporator through creating turbulent regime in the heating shell of the device up to the content of 28...45% DI (dry ingredients) and further finishing drying of the resulting paste in the rotary drum IR-dryer up to the content of 85...92% of DI for production of high quality dried plant semi-finished products having considerable content of BAR.

Specific features of evaporation of the puree using apple, zizifus and blueberries from 10...15 to 28...45% DI in the RFE (rotary-film evaporator) have been experimentally investigated. Modes of the device operation during concentration of fruit-berry puree have been studied.

Kinetics of moisture retention during drying in the rotary drum IR-dryer of preliminary concentrated fruit-berry paste with the layer thickness of raw material 1 mm have been presented.

The advantages of the proposed equipment are as follows: improvement of efficiency of heat exchange by means of creating sustainable turbulent regime in the heating shell of the RFE (rotary-film evaporator) which transmits the heat; reduction of specific content of metal in the RFE and as a result of dimension-weight characteristics; improvement of efficiency of heat exchange in therotary drum IR-dryerbty replacing steam heating to infrared radiation; reduction of duration of the process of IR-drying by use of forced convection and enhancing the quality of the resulting dried semi-finished product through replacing the accumulation (blowing) zone by the direct blowing of fruit and berry paste onto the working surface of the corrugated drum.

Keywords: intensification, development, rotary-film evaporator, rotary drum IR-dryer, fruit and berry raw materials, dried cake mix.