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## Production of cloudifier products from lemon, orange, melon, persimmon fruit and automation in processing

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The relationship between turbidity and conductivity in cloudifier juices from citrus, melon, persimmon fruit was offered for automation in processing. Enzymes in the range to maintain cloud stability were used for micelle formation and inactivation of pectinesterase. The application of proposed procedure considerably increased the turbidity to 350÷800 FNU in 0.8÷1.1°Brix reconstituted juice. The cloudifier juices and concentrates contained 0÷0.5 ml sediment/L; 0÷0,4% v/v pulp. The turbidity and pulp content in the obtained products not changed by 10÷20 min centrifuging. The cloud loss in industry cloudifier concentrates was no more than 21÷38.4% during storage test for. The increase of cloud level of cloudifier juices, concentrates of citrus, melon and persimmon fruit considerably increased their beneficial health properties.

The thermal treatment of cloudifier samples at 85÷95°C not accelerated the sedimentation process. The increase of time factor during concentration of the cloudifier juice from melon led to the increase of cloud loss and altered the colour parameters. The pulp content increased from 0.2÷0.4 to 3÷4%. The brightness and hue were changed from 4.06 to 4.42÷5.69; from 190 to 163÷145 respectively.

Cloudifier industry concentrates after cooled were stable the longer time too. The increase of oligomer pectin content with 60% degree of esterification led to the cloud stability of samples. The samples were stable due to formation of micelle (1.0÷1.3µm) network and modification of continuous phase viscosity by means of pectin oligomers. The pressure treatment of cloudifier juices from persimmon fruit modified the pectin substances and formed the molecules with 60% degree of esterification.

### Biography

G.N. Ignatyeva completed her PhD at the age of 35 years by specialty "Bioorganic Chemistry". In addition she developed: The project for the industrial production of pectin from dry and fresh crust without using alcohol (the pectin price of cost 4,6€/kg); The project for the industrial production of persimmon fruit juice and persimmon fruit concentrate (*diospyros kaki* L.); The project for the industrial production of melon juice and melon concentrate. The project for the industrial production of dietary fibres which have shown the inhibition of cell proliferation (HT29). She has published more than 40 papers in scientific journals and patents.

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