

“EUROINVENT”

METHOD OF DRYING BUCKTHORN SEEDS

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Aim:

The aim of the invention is to design an installation buckthorn seeds drying using SHF energy application.

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Solution:

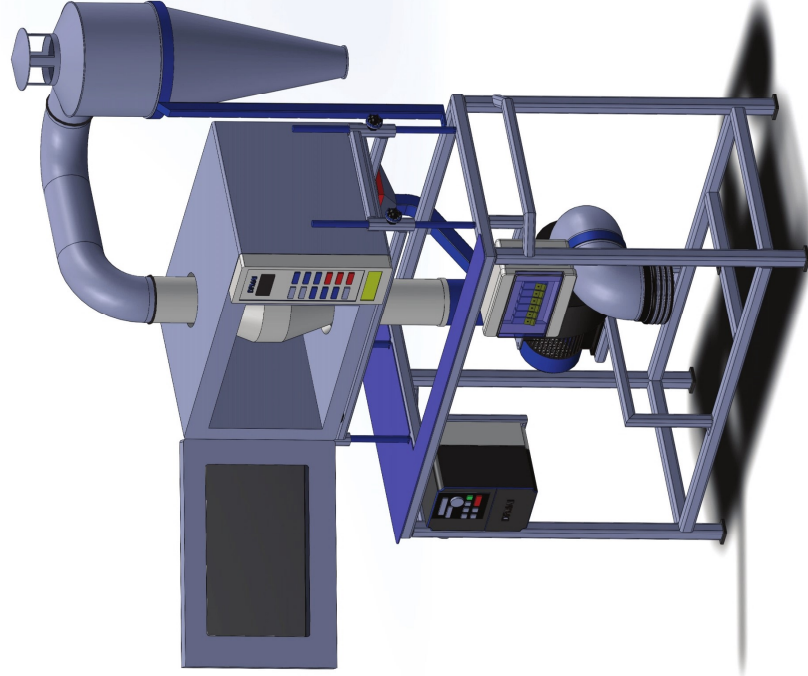
Elaboration of the installation that allows quick and easy buckthorn seeds drying and more important, that allows acquiring a good quality product via well timed seeds evacuation from the drying chamber.

Advantages:

- Online recording of drying process parameters;
- Possibility of using various drying regimes;
- Possibility of quick and easy change of installation's constructive elements;
- Possibility of auto-evacuation of the dried product from the drying chamber.

Status:

3D computerized model;
Functional prototype.



Prototype drying installation
(3D model)

The invention relates to the food industry, namely to a method of drying sea buckthorn seeds. It can be applied to enterprises in the food industry, in laboratories and research centers related to drying processes.

The process of drying the sea buckthorn seeds in a suspended layer with the application of microwaves, according to the invention, consists in the execution of the following stages: Stage I, involves loading the sea buckthorn seeds into the vertically oriented square section tube and the formation of the suspended layer, by a current of air, in which a speed of 9.6 m/s develops, with a flow rate of 360 m³/h. Stage II requires turning on the microwave generator, at 350 W, with a frequency of 2460 MHz for a duration of 140 min. Stage III assumes that after a time of 140 min the first seeds from the suspended layer automatically separate, they have the lowest mass and moisture concentration, after which they are followed by the rest of the seeds, independent of mass and moisture content for each one separately, and finally, after a period of 190 min, the seeds are also separated, which initially had a greater mass and a high moisture content. Thus we obtain a product with a high degree of uniformity of drying, in a short period of time.