

## Low Temperature Microwave Thawing Equipment LD1705

Jam is a gelatinous substance, it is called fruit sauce, which is made of fruits, sugars and acidity regulators and uses more than 100 °C. Making jam is a way to preserve fruit for long time. Jam is mainly used on bread or toast. In order to ensure that the jam can be eaten directly and the nutrients are not lost, it is very suitable for the method of low temperature thawing.

No matter what small fruits such as strawberries, blueberries, grapes, rose fruit, large fruits such as plum, orange, apple, peach can also be made into jam. Only one fruit is used at the same time. Colloids are used in sugar-free jams, cheap jams or special jams (eg durian, pineapple). Colloids commonly used in jams include: pectin, bean gum and sanxian gum.



Jam

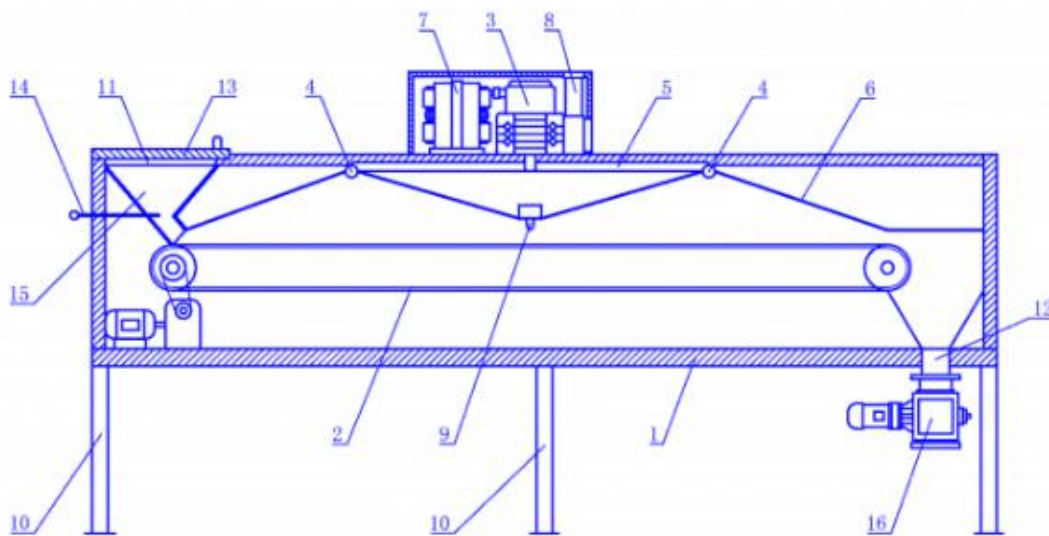
Microwave jam thawing equipment is to slow down the temperature of the frozen jam to 3-4 degrees by microwave. Because of the dielectric constant of the material is very low after the water becomes ice. The microwave of the frequency is 2450 MHz that can directly penetrate the material with a thickness of about 10 cm. It is rapidly heated to achieve the purpose of microwave thawing. In this respect, the thawing speed of the microwave thawing technology is significantly higher than the conventional thermal thawing equipment.

### **Advantages of LD1705 jam low temperature microwave thawing equipment:**

The LD1705 low temperature microwave thawing equipment directly acts on the whole seabuckthorn fruit that needs to be thawed by the microwave generated by the magnetron through the waveguide and the microwave. The microwave is deepened into the interior for

heating and does not require a heat conduction process, thereby achieving simultaneous heating inside and outside, greatly saving thawing time and improving production efficiency. At the same time, the whole body is kept in a closed environment by sealing arrangement of the feed port 11 and the discharge port 12. This not only ensures that the nutrition of seabuckthorn is not damaged and the fruit is not corrupt during the thawing process, but there is no danger of microwave radiation when working and it does not pollute the environment. The utility model has the advantages that the design is reasonable, the structure is simple, the thawing is uniform, the speed is fast, the synchronization is good, the production is efficient, the maintenance is simple, the sea buckthorn whole fruit can be thawed without crushing, no nutrient loss, no pollution and deterioration. . The temperature rises from the deep freezing temperature (below  $-19\sim-22\text{C}^{\circ}$ ) to the freezing point temperature (about  $0\sim-4\text{C}^{\circ}$ ).

**Description of accessories for LD1705 low temperature microwave thawing equipment:**



Structure sketch of LD1603 vegetable dehydration equipment

Machine rack 1, conveyor belt 2, magnetron 3, microwave release port 4, waveguide 5, reflector 6, high voltage transformer 7, cooling fan 8, infrared temperature measuring device 9, strut 10, feed port 11, out The material port 12, the sealing end cover 13, the adjusting inserting plate 14, the feeding hopper 15, the closing fan 16.

**Technical parameters of LD1921 LD1705 low temperature microwave thawing equipment:**

Capacity	6T	8-10T	15-20T	customization
Total power	10KW	20KW	50KW	customization
Feed per hour	500KG	800-1000KG	1500-2000KG	customization
Operational pressure	Atmospheric pressure			
Service life	5-8 years			
Working method	Completely continuous			
Heating method	Electric energy			
Leakage value	$\leq 3\text{mw/m}^3$			
Microwave frequency	2450/915MHz			
Transmission speed	0-5m/min(adjustable)			
Cooling method	Cooling method			

**Working principle of LD1705 low temperature microwave thawing equipment:**

LD1705 low temperature microwave thawing equipment is composed of a sealed body 1 and a microwave heating device disposed on the body 1 and a conveyor belt 2 disposed in the body 1. The microwave heating device is used for heating and thawing the whole fruit of the seabuckthorn on the conveyor belt 2 so that the surface is simultaneously subjected to the action of the electromagnetic field to generate heat.

The uniformity of thawing is good, and the phenomenon of external heat and internal cooling does not occur, so that the whole fruit of seabuckthorn can be directly thawed without being broken and thawed again. The microwave heating device includes a magnetron 3 that is disposed outside the body 1 and a microwave release port 4 that is uniformly disposed above the inside of the body 1. The microwave release port 4 is connected to the microwave transmitting end of the magnetron 3 by the waveguide 5. The microwave is generated by the magnetron 3, it is conducted through the waveguide 5. The microwave is irradiated onto the material by the microwave discharge port 4. Conical reflectors 6 are disposed above the conveyor belt 2 with the microwave release opening 4 as an apex. The reflector 6 is made of metal, the inner layer is coated with a non-magnetic material, and the bottom is at a distance of more than 5 cm from the conveyor belt 2.

In the preferred embodiment, taking two microwave release ports 4 and two reflectors 6 as an example, the microwaves can uniformly and centrally heat the seabuckthorn through the action of the reflector 6, thereby improving the freezing efficiency and saving energy consumption.

The magnetron of the LD1705 low temperature microwave thawing equipment is connected to the high-voltage transformer through the circuit board to increase the energy required to generate the microwave. A cooling fan is arranged on one side to cool the magnetron. The bottom connection of the reflector is provided with an infrared temperature measuring device connected to the circuit board, the temperature of the seabuckthorn is measured to feed back to the magnetron, thereby precisely controlling the time and temperature of the thawing.

**Customers who purchase or customize the LD1705 low temperature microwave thawing equipment and the frozen block microwave thawing equipment will enjoy the following services:**

1. Within one year, solve technical problems free of charge, engineer online guidance or home repair.
2. The 24-hour consultation platform is available for you to provide technical support.
3. Beyond the warranty period, the engineer will still repair the machine for you at no charge, only the cost of replacing the parts.

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