

Freeze-Drying Plant 1.2 kW, 2400..2500 MHz & 1 kW 900..915 MHz

Based on Solid State Microwave Technology



Application

Laboratory device for microwave freeze-drying of foods for shorter drying times of thermally sensitive products under vacuum atmosphere.

Technical Data

Type of Microwave Generators	Solid State
Power	4 x 300 W = 1.2 kW 2400..2500 MHz 1 x 1000 W = 1.0 kW 900..930 MHz continuously and steplessly adjustable
Main Supply	3x 400 VAC, 50 Hz/ N/ PE
Throughput	6 kg/h

Cooling

Water cooling

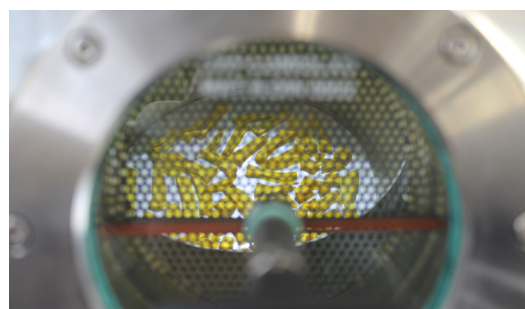
Total cooling water flow rate	Minimal 30 l/min.
Water temperature	13.5° - 25° C
Inlet pressure	min. 3 bar, max. 4 bar

Dimensions

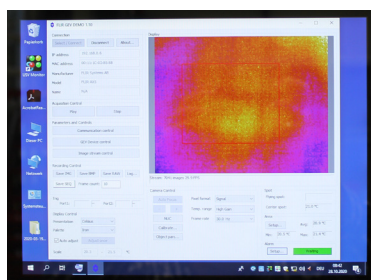
Inner dimension	Ø 804 x 1120 mm
Outer dimension WxHxD	ca. 2950 x 2400 x 3390 mm
Weight	ca. 3000 kg

Features

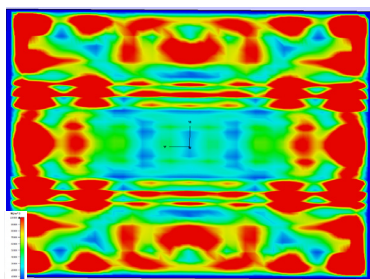
- Actively heated and insulated chamber wall
- Automatic pressure and temperature measurement
- Weiging for rotating product support in vacuum, accuracy ± 0.1 g
- Vacuum unit with silencer for operation pressure of 0.05mbar
- Chamber with condenser to remove moisture
- Service door for easy cleaning of the condenser
- Stainless steel version including control cabinet
- PLC Control with touch panel



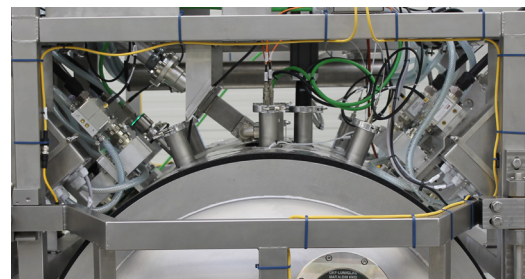
Product test with mango



IR check of temperature



Power loss density distribution



Isolators for prevention of reflecting radiation

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Examples of freeze-dried food tests

Process temperature ~40° C



Mango



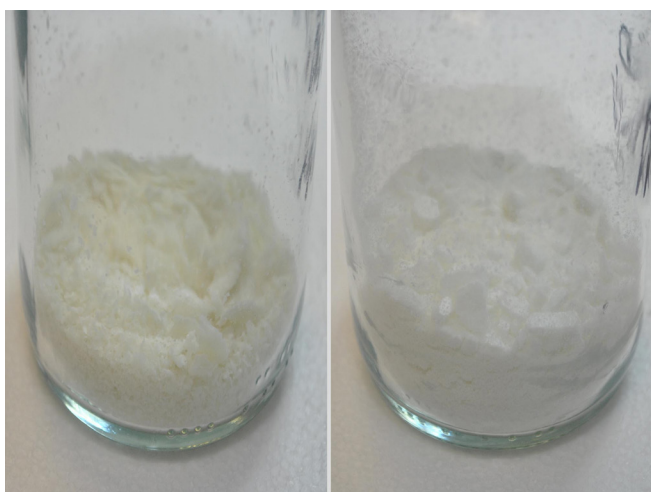
Raspberry



Wild garlic



Cheese balls



Camel milk