

Microwave Freeze Drying for Food/Pharma/Chemical/Medical & Ceramics

Application:

Ultrafast Microwave Freeze Dryers dry temperature sensitive products

Particular Advantages for Products:

- Cut down drying time from days into hours (*saves energy, saves costs, saves space*).
- Due to **3D heating** sublimation is not only limited to layer-drying like in conventional freeze-drying. Sublimation is taking place throughout the volume, therefore, better *textures* and *structures* can be maintained.
- Combined processes in solid and liquid state with ultrafast heat transfer enable to generate *new products*.

Scale your application easily from lab to production

...from Lab to Production...

Pharma Example:

Drying Time: 2h
Max Temp: $\leq 20^{\circ}\text{C}$
Residual MC: 600ppm

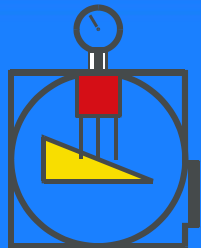


2kW/2450MHz Lab Microwave Freeze Dryer

Food Example: MW-Freeze Drying of complete fruits like strawberries, raspberries, blueberries etc.



24kW/2450MHz Microwave Freeze Dryer



PÜSCHNER Microwaves offers Microwave Freeze Dryers from 1 to 30kW Microwave Power in Batch and semi-continuous operation.

