Comparing various drying procedures at the TU Weihenstephan

Vacuum drying is part of the basic education in nutritional sciences. Students at the TU Weihenstephan get to know the process by experiments using the vacuum drying oven.

Basic research at the TU Weihenstephan

It is no exaggeration that the Science Centre Weihenstephan of the Technical University Munich (in short, WZW) is referred to as the home of the nutritional sciences and the environmental sciences in Germany. Surrounded by Bavarian manufacturers of beer and milk rich in tradition, the WZW has long been a premium address for basic research as well as applied and practical research, amongst others covering food process engineering.

Comparing vacuum drying with spray drying
Comparing vacuum drying with spray drying and freeze drying

Students at the department of food process engineering and dairy technology, for example, learn not only in theory about the various drying procedures for skimmed milk, full cream milk and whey powder, but they also have to perform these procedures themselves. The tests for vacuum drying are performed in the Memmert vacuum drying oven. At the end of the process, the milk powder is compared, in terms of water content, water activity, solubility, structure, taste, smell, consistence and colour with the samples from freeze drying and spray drying.

By the way: The first coolable Memmert vacuum drying oven was built as a customised model for the WZW. Once the test phase has been completed, a detailed user report can be found at www.atmosafe.net.

An overview of focus topics

- Vacuum drying
- Basic research
- TU Weihenstephan
- Nutritional sciences
- Environmental sciences
- Vacuum drying oven
- Milk powder
- Freeze drying
- Spray drying
- Food process engineering
- Drying procedures

Titanium powder in medical technology

Run times of more than 12 hours a day demand a lot from the vacuum drying oven at the GfE Metalle und Materialien production facilities for titanium powder.

more information