Chair in brewing and beverage technology at the Weihenstephan site of the TUM

The Technical University of Munich (TUM) celebrated its 150 year anniversary in 2018. On the 12th of April 1868, Ludwig II of Bavaria signed the foundation ordinance for the "Königlich bayerische polytechnische Schule in München", which has become the present day Technical University of Munich. One and a half decades later, the university has achieved international standing.

Already in 2015, the TU Munich celebrated ceremonially the 150th jubilee of the faculty for brewing and food technology in Weihenstephan. For many years, Weihenstephan has been an international trademark for research and learning in brewing and beverage technology and looks back over years of impressive development. From the first brewery course in the year 1865 through to today, the faculty, with its wide range of study courses, has developed into one of the world's largest institutes of its kind. The number of brewing and beverage technology students at Weihenstephan has risen from around 200 before the Second World War to currently around 450 on the brewing courses (in total around 1,100 students in the faculty for brewing and food technology). The history of brewing combines tradition with innovation.

At the School of Life Sciences Weihenstephan, the study course Brewing and beverage technology embodies a flexible and modern university course, true to the motto: "Science for tomorrow's world".

Staff of the chair

Scientific impulses and innovative ideas

With the foundation of the School of Life Sciences Weihenstephan in 2000, the traditional structure of the Weihenstephan campus changed. In the 2009, the two brewing technology chairs, the chairs for brewing technology I and II, were combined to form the present-day chair for brewing and beverage technology (BGT) under the direction of Prof. Becker.

The chair for brewing and beverage technology, with its around 100 employees, aims to accompany the new challenges of modern food production with scientific impulses and support innovative ideas.

The research activities involve efforts to elucidate the behavior of the complex plant-based food and beverage matrix, with all their interactions involving the physicochemical and biological reactions taking place in a procedural and process technology context. The scientific focus is on the topic area beverages, naturally with particular emphasis on beer, but also bread and baked products. The methodology of the research is also designed to be independent of the respective end product, which includes for example, cereals/baked goods or other food systems.

The aim is to translate the scientific standard into an application-relevant situation, so that the branches involved can directly apply the findings – according to the mission statement "Science for tomorrow's world". In addition to the established analytical processes, important structural and biotransformation processes from the grain to the end product are also investigated, for example using new imaging processes, and modern process technologies are developed (e.g. continuous processes, new structural procedures, innovative process management). The chair is made up of four research groups (AG)

- AG Raw material-based brewing and beverage technology
- AG Cereal technology and process engineering
- AG Bio-PAT and digitalization
- AG Beverage and cereal biotechnology

as well as two technical units (TE)

- TE Research brewery and engineering
- TE Analytical and advice services

which are intensively involved in this research concept.

Research brewery Weihenstephan

One of the technical units incorporates the research brewery Weihenstephan. In 1902/04, a testing and teaching brewery (today the research brewery) was built and, together with the institute building "Brewing technology" formed the west wing of the familiar Weihenstephan silhouette. The history of the research brewery is shaped by constant modernization and expansion. Finally, in 2006, the research brewery facility was redesigned in a modular system, which allows the highest degree of flexibility. In this way, the research brewery can be expanded at any time, and therefore guarantees the ideal conditions for contemporary research and teaching. Thanks to its state-of-the-art and versatile equipment, students can be trained according to the latest technology standards and take part in research. As part of this, the

equipment of the research brewery is used in a wide range of work experience placements, as well as in practical training for the trade “brewer and maltster”.

Furthermore, the research brewery Weihenstephan is a successful cooperation partner for the industry. It has developed innovative products in a multitude of projects, which the industry subsequently adopted.

In addition to numerous complementary practical courses, the chair for brewing and beverage technology also covers the brewing and beverage technology core modules in its teaching programme.

Furthermore, the chair for brewing and beverage technology also offers seminars under the title “Weihenstephan technology workshops”, which provide expert knowledge in the areas brewing and bakery technology in addition to the university courses. You can find further information about the workshops on our homepage: www.weihenstephan-weiterbildung.de

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