

52nd German Food Chemistry Days

From 16 to 18 September 2024, the 52nd German Food Chemistry Days took place at the Technical University of Munich in Freising. As part of the official programme, the IFF presented two scientific contributions:

Oral presentation: Patrick Sudwischer, as the lead author, presented findings on chitin analysis: **"Integration of Chitin Analysis into the Weende Method: An Economically Viable Approach for Determining Chitin Content in Insect-Based Feed and Compound Feeds."**

Poster contribution: Mika Rickers (graduate student) and Patrick Sudwischer showcased a poster from the BLE funded project TeMoTech: **"The Yellow Mealworm (*Tenebrio molitor*) as a Forward-Looking Feed for Monogastric Animals – Utilizing Regional By-Products and Novel Technological Refinements to Improve Nutrient Utilization": "Procedures for the Enzymatic Hydrolysis of the Protein- and Chitin-Rich Cuticle of Yellow Mealworm Larvae (*Tenebrio molitor*) to Enhance Nutrient Availability in Insect-Based Feeds."**

Additionally, the IFF co-authored a poster contribution by Manuela Bedenbender from the University of Giessen. In collaboration with Prof. Dr. Zorn's research group, chitin in edible mushrooms was analysed, accompanied by a method comparison between the classical approach and the IFF's chitin determination method.

The conference was attended by approx. 500 participants, including professionals from research, industry and official inspection bodies. The IFF was one of the few institutes contributing to the field of animal feed and played a significant role in representing feed-related topics within the food chemistry community.

BMEL-/FLI Workshop

On 6 and 7 November 2024, the IFF presented the expert lecture "Smart Feed Production" as part of the BMEL-/FLI workshop titled *"Animal Nutrition in the Context of Societal Expectations and Crisis Conditions."*

Speakers:

Dipl.-LMChem. Patrick Sudwischer
Prof. Dr.-Ing. Werner Sitzmann

The presentation explored innovative approaches for energy- and resource-efficient feed production, focusing on the modelling of physical-chemical processes. It also addressed sustainable production methods and flexible formulation developments to adapt to global challenges.



Photo: P. Sudwischer (IFF)

EuroTier

On 12 November 2024, Patrick Sudwischer and Nina Kröncke (FLI, Braunschweig/Germany) delivered a specialised lecture on the BLE funded project TeMoTech during EuroTier. The presentation was part of the DLG Inhouse Farming Programme.

Key topics of the lecture included the efficiency of insect farming and the technological processing of insect larvae, with a focus on chitin availability for monogastric animals.

Collaboration between IFF and C. Gerhardt GmbH & Co. KG

On 21 November 2024, Patrick Sudwischer welcomed Björn Krüger, Laboratory Manager, and Alexander Kaiser, Sales Expert, from C. Gerhardt GmbH & Co. KG, Königswinter, at the IFF institute.

Together, they successfully put a new VAPODEST 500 into operation. This state-of-the-art device equips the IFF to precisely analyse nitrogen and protein content in animal feed.

The collaboration between Gerhardt and the IFF has already proven fruitful: an innovative method for determining chitin in the processing of insect larvae was jointly developed. C. Gerhardt stated, *"As a new member of the IFF, we are excited to continue this partnership in the future and embark on new projects together."*

We eagerly look forward to what lies ahead!



Photo from left: B. Krüger und A. Kaiser (C. Gerhardt) GmbH & Co. KG, P. Sudwischer (IFF)

Kreuzjoch plansifter (Rüter)

As part of restructuring the premises at the German Milling School Braunschweig (DMSB), the Kreuzjoch Plansifter was permanently loaned to the IFF. This equipment will be used to set up a facility for structural milling and small-scale fine milling at the IFF.

The installation is complete and commissioning is planned for the first quarter of 2025.



Photo: Kreuzjoch-plansifter

New opportunities for training and research: The pneumatic demo plant at IFF

In spring 2023, Bühler AG Uzwil/Switzerland decided to transfer the pneumatic demo plant. A contact was established with the German Milling School Braunschweig (DMSB) to explore the possibility of taking over the plant. However, due to structural constraints, the plant could not be installed directly at the DMSB. Through close collaboration between the DMSB and the IFF, the innovative idea arose to integrate the plant into the IFF. It will now be used for training and research purposes. With the installation of the pneumatic demo plant at IFF, exciting new opportunities are created:

- **Standardized stability and wear tests:** The plant will be used in training courses in cooperation with DMSB.
- **Cutting-edge research:** Current scientific questions can now be investigated under practical conditions.

This cooperation between IFF and DMSB highlights the importance of joint projects for the further development of feed technology and the training of future experts in milling at Braunschweig.

We are excited to actively utilise this valuable resource for training and research! The planned commissioning of the plant at IFF is scheduled for the first quarter of 2025.



Photo: Pneumatic demo system