

## Annual Report 2006

To order the 2006 annual report please contact:

**Deutsche Forschungsanstalt für  
Lebensmittelchemie**  
**Mrs. A. Stoiber**  
**Lise-Meitner-Strasse 34**  
**D-85354 Freising, Germany**  
**Phone: +49 8161 712928**  
**Fax: +49 8161 712970**  
[Anneliese.Stoiber@lrz.tum.de](mailto:Anneliese.Stoiber@lrz.tum.de)



## Table of Contents

### Structure and Bioactivity of Low-Molecular Food Ingredients (Hedonic Value)

- The Influence of Progressive Post Harvest Treatments on the Concentration of Characteristic Off-Odorants in Coffee
- Changes in the Concentrations of Important Odorants During Storage of Raw Coffee Beans
- Influence of Different Oxygen and Moisture Contents on the Stability of Key Odorants in Roasted Coffee Powder
- Characterisation of Key Odorants in Cocoa Mass from Fine Cocoa Beans
- On the Role of Aroma Compounds for the Creaminess of Dairy Products
- Influence of the Ripening Period and Heat Treatment on the Formation of Important Aroma Compounds in Gouda-Type Cheese
- Formation of Aroma-active Compounds Formed During Peroxidation of Eicosapentaenoic Acid
- Comparison of Important Aroma Compounds in Hand Squeezed Pineapple Juice and a Commercial Juice Made from Concentrate
- Influence of Pulp Fermentation on the Key Aroma Compounds of Apple Juice
- Enzymatic Release of Linalool from Glykosides in different Hops Varieties
- Investigations on the Formation Pathway of the Crumb Odorant 3-Methylbutanol During Bread Dough Fermentation
- Influence of the Molecular Structure of Fruity Smelling Esters on the Odour Thresholds
- Reaction Mechanism of Semiconductor Gas Sensors for the Detection of Odorant Compounds

### Development of Analytical Methods

- Quantitation of Furan in Foods by Solid Phase Micro Extraction in Combination with a Stable Isotope Dilution Assay
- Quantitative analysis of N-Phenylpropenoyl-L-Amino Acids in Roasted Coffee and Cocoa by Means of a Stable Isotope Dilution Assay

## Correlation between the Chemical Structure and the Physical Properties of Biopolymers

- Functionality of Glutenin Subunits Produced by Transgenic Yeast
- Proteolytic Degradation of Coeliac Active Peptides
- Studies on Transgenic Maize Transformed with Glutenin Subunits of Wheat
- Studies on Einkorn Cultivars
- Degradation of Gluten Proteins during Sourdough Fermentation
- Concentration of Bioactive Constituents of Wheat as Affected by Germination
- Fractionation of Wheat, Rye, and Barley Flour with Non-Aqueous Systems
- Comparative Studies on the Effects of Glycolipids in Breadmaking
- Influence of the Fatty Acid on the Baking Activity of Phosphatidylcholine

## Physiological Effects of Food Ingredients

- Elucidation of Intranasal Migration of Odorants
- Influence of High Hydrostatic Pressure on the Formation of Posttranslational Modified Lysine and Arginine Residues
- Model Studies on the Influence of High Hydrostatic Pressure on the Formation Pathway of N<sup>ε</sup>-Carboxymethyllysine
- Influence of N<sup>ε</sup>-Carboxymethyllysine-fortified Casein on Protein Expression in Caco-2 Cells
- A Water-Soluble Bread Crust Extract Protects Cardiac Fibroblasts against Reactive Oxygen Species in vitro
- Stimulation of Gastric Acid Secretion from Human Stomach Cells after Exposure to Different Coffee Brews and Coffee Components
- The Regulative Effect of Coffee on H<sup>+</sup>,K<sup>+</sup>-ATPase and the Histamine H<sub>2</sub>-Receptor
- Influence of Orange Juice and its Compounds on the Formation of Interleukine-6 in vitro
- Antioxidative Activity and Metabolism of trans-Resveratrol-3-O-β-D-Glycoside in Humans
- Development of an Antioxidant Test for Measuring Radical Scavenging and Reductive Capacity in vitro
- Quantitating the Elongation of α-Linolenic Acid into Eicosapentaenoic and Docosahexaenoic Acid in the Presence of Varying ω6-/ω3-Fatty Acid Ratios in vitro
- Effects of ω3-Long Chain Polyunsaturated Fatty Acids on Fasting Plasma Glucose, Insulin and Free Fatty Acid Concentrations

## Food Composition Tables

- Folate Contents of Legumes Determined by Stable Isotope Dilution Assays