

Editorial

Water in food

This issue of *Food Chemistry* is a special issue devoted to the publication of papers given at EUROFOOD'S WATER, the fourth International Workshop on Water in Foods held at Brussels on 27 and 28 March, 2006. The Workshop was divided in four sessions, respectively, entitled:

- Water Structure and Interactions in Food Systems;
- Water Determination in Food Systems;
- Control of Water in Food;
- Water Activity and Functional Properties of Food.

Papers given at Session I aimed at elucidating molecular mobility and structural changes in small carbohydrates – water systems, both in glasses and crystalline phases. Water interactions and diffusion of small molecules in edible films were also treated in this session.

Session II dealt with the determination of water in foods. It is not rare that the choice of a method for the determination of water content in a food or an agricultural product is a matter of controversy. That is why it is important to clarify this matter by showing that loss of weight, although conventionally agreed in the trade of many goods, is far from accounting for the real water fraction in the sample and that the Karl Fischer method detects the total water content selectively and independently from the nature of the sample analysed. Other techniques like NIR, NMR or MRI might be of some help in special circumstances like on-line measurements or the mapping of moisture migration.

Papers at Session III treated the important subject of the control of water in different food commodities under the legal and economic aspects. Beside the quantitative control of moisture, added water or the modification of dry matter to retain water might instigate to think about such practices.

Session IV was devoted to the thermodynamic activity of water (a_w) and its pertinence in controlling together with glass transition the physical state of food products during storage, processing or formulation. Particularly sensitive to water activity are sugars, cereal based products or probiotic bacteria.

More than 30 papers were presented at Poster Sessions. Some of the posters fitting with the subjects treated in workshop, namely, water structure and interactions, methods of water determination and control and the water activity and functional properties of foods, are reported as research papers in this special issue on “Water in Food”.

EUROFOOD'S WATER is becoming a non-profit organisation promoting a meeting every two years early in spring for scientists and technicians from academic research centres and industries interested in “Water in Food”. In the past, these meetings were held in Ispra/Italy, Reims/France, Lausanne/Switzerland and Brussels/Belgium. The 5th Conference on Water in Food organised by EUROFOOD'S WATER will take place at Nürtingen (near Stuttgart, Germany) from 6 to April 2008.

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