

Preface

Trace elements may have different functions in human and animal metabolism: some are toxic (e.g., Hg), others are essential to maintain good health (e.g., Ca), or they can be essential but also toxic, depending on the concentration in the body or in parts thereof (e.g., Se).

The importance of various aspects of trace elements in relation to food is steadily increasing in the perception of the consumer and the respective authorities: food contaminants, essential and toxic elements, bioavailability and speciation, nutritional value and fortified food, reliable measurement of contents, etc. In addition, through the many minor and major food-related incidents during recent years the consumer is becoming more concerned about the quality and safety of food. As a result, research and development efforts in this area have also been increased and/or been redirected.

TEF-2 was organized in Brussels 7–8 October 2004 by the Institute of Reference Materials and Measurements of the Joint Research Centre of the European Commission, with the support of the Department of Food Analysis, Institute of Agricultural and Food Biotechnology of the University of Warsaw, Poland and the Centre National de la Recherche Scientifique, France. It was carried through under the auspices of IUPAC.

The objectives laid down for the symposium were

- presenting state-of-the-art analytical methods for the enforcement of legal limits of trace elements in food;
- disseminating new ideas and findings within the scientific community;
- providing a forum for the exchange of new knowledge and experience between R&D, authorities, and industry; and
- bringing together experts in the field with newcomers.

TEF-2 was attended by 93 participants from 60 different institutions in 23 countries. It consisted of 26 lectures and 56 posters, structured according to the following four main topics:

- trace elements in the food chain (from the environment to shelf product) including the effects of processing and of legislation
- trace element bioavailability—toxicological and nutritional aspects
- fortified food and supplementation legislation, manufacturing and labeling, standards
- advances in trace element analysis in food matrices

It was emphasized that the field of trace elements in food is a lively research area, which generates interest and involvement from researchers, authorities, and industry, of course triggered and nurtured by the equally high interest of the consumer. A selection of the invited contributions to TEF-2 is presented in the subsequent seven papers in this issue.

The importance of scientific exchange in this field was, again, recognized during TEF-2. Therefore, the continuation of this series of conferences was discussed, and the venue for the subsequent TEF-3 was decided. It will be organized by R. Lobinski of CNRS in Pau, France, at the beginning of October 2008.

Michael Bickel
Conference Editor