



DEVELOPMENTS IN FOOD SCIENCE 37A

# **FOOD FLAVORS: GENERATION, ANALYSIS AND PROCESS INFLUENCE**

PROCEEDINGS OF THE 8TH INTERNATIONAL FLAVOR CONFERENCE,  
COS, GREECE, 6-8 JULY 1994

*Edited by*

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Proceedings of the 8th International Flavor Conference, Cos, Greece, 6-8 July 1994

## FORWORD

The 8th International Flavor Conference held on Cos, Greece, July 6-8, 1994 distinguished itself from its predecessors in a number of ways.

Attendance increased by about 30% from the previous one with new blood from Mexico, Pais Vasco, Lithuania and the Czech Republic. A record number of oral and poster presentations, in addition to analytical and flavor compounds formation topics, dealt with biotechnological applications to flavor generation, the factors influencing food flavor and process optimization.

The record number of presentations has led to Proceedings of record length - over 2000 pages - necessitating two volumes: the Publishers help in this matter is greatly appreciated.

By all accounts, the venue - birthplace of Hippocrates - and general amenities contributed to an International Conference that was successful both scientifically and in the combination of business with pleasure.

It is hoped that the 9th International Conference scheduled for 1996 might prove equally successful.

The Editor

## INTRODUCTION TO THE PROCEEDINGS OF THE 8TH INTERNATIONAL FLAVOR CONFERENCE

The 8th International Flavor Conference was held July 6-8, 1994 in Cos, Greece. This conference, was co-sponsored by the Agricultural and Food Chemistry division of the American Chemical Society; the Institute of Food Technologists; and the Society of Flavor Chemists, Inc., USA; in association with the Food Chemistry Department of the University of Ioannina; the Department of Organic Food Chemical Technology of the University of Thessaloniki; and the Greek Institute of Food Scientist, Athens, Greece. The theme of the conference was "Recent Developments in Food Science and Nutrition."

This book contains separate chapters for each of the papers presented during the conference. Major emphasis was placed on the effects of processing and food components upon the flavor of foods and beverages. Processing treatments included: roasting of peanuts, extrusion cooking of poultry, spray drying of natural flavor materials, cooking rates of foods, gamma radiation of packaging films, stir-frying of sautéed flavors, and emulsification properties of egg yolk and lupin proteins. A number of paper were presented on: 1) the interaction of flavor compounds with flour, starch, and polysaccharides; 2) factors affecting development of flavor in whiskey, wines, fermented products, alcohol precursors, and model food systems, and 3) applications of enzymes for production of flavor in fish, lobster and pork. Papers were also presented on the development and application of analytical methods for isolation and identification of volatile compounds and flavors from variety of food products, i.e., carbon dioxide extraction of flavor, capillary gas chromatographic determination of aziridine, droplet counter-current chromatography, flavor quality of mushrooms, terpineol in orange flavored beverages, microbeam molecular spectroscopy, GC/MS of smoke flavorants, aroma compounds in wines and whiskeys, and flavor peptides in beef, pork and cured hams.

Information presented in this book further confirms the tremendous importance of flavor chemistry in a wide variety of food and beverage products. Continued improvements in existing analytical methods and instrumentation and the development of new and improved analytical methods and instrumentation have greatly enhanced our ability to isolate, identify and quantitate food flavor compounds. Information presented in this book should be useful for chemists, scientists, and technologists working in flavor chemistry, food product research and development, and food quality control.

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