



# COMPENDIUM OF FOOD ADDITIVE SPECIFICATIONS

Joint FAO/WHO Expert Committee on Food Additives

69th meeting 2008



COMPENDIUM  
OF FOOD ADDITIVE  
SPECIFICATIONS

Joint FAO/WHO Expert Committee on Food Additives

69<sup>th</sup> meeting 2008

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS  
Rome, 2008

The designations employed and the presentation of the material in this information product do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations concerning the legal or development status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

ISBN 978-92-5-106065-0

All rights reserved. Reproduction and dissemination of material in this information product for educational or other non-commercial purposes are authorized without any prior written permission from the copyright holders provided the source is fully acknowledged. Reproduction of material in this information product for resale or other commercial purposes is prohibited without written permission of the copyright holders. Applications for such permission should be addressed to:

Chief  
Electronic Publishing Policy and Support Branch  
Communication Division  
FAO  
Viale delle Terme di Caracalla, 00153 Rome, Italy  
or by e-mail to:  
[copyright@fao.org](mailto:copyright@fao.org)

© FAO 2008

#### **SPECIAL NOTE**

While the greatest care has been exercised in the preparation of this information, FAO expressly disclaims any liability to users of these procedures for consequential damages of any kind arising out of, or connected with, their use.

## TABLE OF CONTENTS

List of participants .....	vii
Introduction.....	ix
Specifications for certain food additives.....	1
Asparaginase from <i>Aspergillus niger</i> expressed in <i>A. niger</i> .....	3
Calcium lignosulfonate (40-65) .....	7
Carob bean gum .....	17
Carob bean gum (clarified) .....	21
Ethyl lauroyl arginate.....	25
Guar gum .....	31
Guar gum (clarified) .....	35
Iron oxides .....	39
Isomalt.....	43
Monomagnesium phosphate .....	49
Paprika extract .....	51
Patent Blue V .....	57
Phospholipase C expressed in <i>Pichia pastoris</i> .....	61
Phytosterols, phytostanols and their esters .....	65
Polydimethylsiloxane .....	71
Steviol glycosides .....	75
Sunset Yellow FCF .....	79
Trisodium diphosphate .....	83
Withdrawal of specifications for certain food additives .....	85
Analytical methods .....	87
Specifications for certain flavourings .....	89
New specifications .....	91
Spectra of certain flavourings agents .....	108
Index:Specifications for certain flavourings .....	125
Annex 1: Summary of recommendations from the 69 <sup>th</sup> JECFA .....	127
Annex 2: Recommendations and further information required .....	139
Corrigenda.....	141

## LIST OF PARTICIPANTS

### **JOINT FAO/WHO EXPERT COMMITTEE ON FOOD ADDITIVES, 69<sup>TH</sup> MEETING Rome, 17 – 26 June, 2008**

#### **Members**

Prof Jack Bend, Department of Pathology, University of Western Ontario, Canada

Prof Maria Cecilia de Figueiredo Toledo, University of Campinas, SP, Brazil

Dr Yoko Kawamura, National Institute of Health Sciences, Tokyo, Japan

Dr Paul M. Kuznesof, Silver Spring, MD, USA

Dr John C. Larsen, National Food Institute, Technical University of Denmark, Denmark (Chairman)

Dr Catherine LeClercq, National Research Institute for Food and Nutrition (INRAN), Rome, Italy

Dr Antonia Mattia, Food and Drug Administration, College Park, MD, USA

Mrs Inge Meyland, National Food Institute, Technical University of Denmark, Denmark (vice-Chairman)

Dr Gérard Pascal, INRA (Institut National de la Recherche Agronomique), L'Etang-La-Ville, France

Dr Josef Schlatter, Food Toxicology Section, Swiss Federal Office of Public Health, Zürich, Switzerland

Ms Elizabeth Vavasour, Food Directorate, Health Canada, Ottawa, Canada

Dr Madduri Veerabhadra Rao, Central Laboratories Unit, United Arab Emirates University, United Arab Emirates

Prof Ronald Walker, School of Biomedical and Molecular Sciences, University of Surrey, Surrey, UK

Mrs Harriet Wallin, National Food Safety Authority (Evira), Helsinki, Finland

Dr Brian Whitehouse, Bowdon, Cheshire, United Kingdom

#### **Secretariat**

Dr Peter J. Abbott, Canberra, Australia (WHO Temporary Adviser)

Ms Janis Baines, Food Standards Australia New Zealand, Canberra Australia (FAO Expert)

Dr Diane Benford, Food Standards Agency, London, United Kingdom (WHO Temporary Adviser)

Dr Annamaria Bruno, Secretariat of the Codex Alimentarius Commission, Food and Agriculture Organization, Rome, Italy (FAO Codex Secretariat)

Dr Richard Cantrill, American Oil Chemists' Society, Urbana, IL, USA (FAO Expert)

Dr Ruth Charrodiere, Nutrition and Consumer Protection Division, Food and Agriculture Organization, Rome, Italy (FAO Staff Member)

Dr Junshi Chen, Chairman of the Codex Committee on Food Additives (CCFA), Institute of Nutrition and Food Safety, Beijing, China (WHO Temporary Adviser)

Dr Myoengsin Choi, International Programme on Chemical Safety, World Health Organization, Geneva, Switzerland (WHO Staff Member)

Dr Michael DiNovi, Food and Drug Administration, College Park, MD, USA (WHO Temporary Adviser)

Dr Jean-Charles LeBlanc, French Food Safety Agency (AFSSA), Maisons Alfort, France (WHO Temporary Adviser)

Prof Symon M. Mahungu, Egerton University, Njoro, Kenya (FAO Expert)

Mrs Heidi Mattock, Tignieu Jameyzieu, France (Editor)

Dr Hyo-Min Lee, National Institute of Toxicological Research, Seoul, Republic of Korea (WHO Temporary Adviser)

Dr Ian C. Munro, CanTox Health Sciences International, Mississauga, Ontario, Canada (WHO Temporary Adviser)

Dr Utz Mueller, Food Standards Australia New Zealand, Canberra Australia (WHO Temporary Adviser)

Dr Zofia Olempska-Bier, US Food and Drug Administration, College Park, MD, USA (FAO Expert)

Mrs Marja E.J. Pronk, Center for Substances and Integrated Risk Assessment, National Institute for Public Health and the Environment, Bilthoven, the Netherlands (WHO Temporary Adviser)

Prof Andrew G. Renwick, Clinical Pharmacology Group, University of Southampton, Southampton, United Kingdom (WHO Temporary Adviser)

Prof I. Glenn Sipes, Department of Pharmacology, College of Medicine, University of Arizona, Tucson, AZ, USA (WHO Temporary Adviser)

Dr Klaus Schneider, FoBiG (Forschungs- und Beratungsinstitut Gefahrstoffe GmbH), Freiburg, Germany (WHO Temporary Adviser)

Dr Angelika Tritscher, International Programme on Chemical Safety, World Health Organization, Geneva, Switzerland (WHO Joint Secretary)

Dr Takashi Umemura, National Institute of Health Sciences, Tokyo, Japan (WHO Temporary Adviser)

Dr Annika Wennberg, Nutrition and Consumer Protection Division, Food and Agriculture Organization, Rome, Italy (FAO Joint Secretary)

Prof Gary M Williams, Environmental Pathology and Toxicology, New York Medical College, Valhalla, NY, USA (WHO Temporary Adviser)

## INTRODUCTION

This volume of FAO JECFA Monographs contains specifications of identity and purity prepared at the 69<sup>th</sup> meeting of the Joint FAO/WHO Expert Committee on Food Additives (JECFA), held in Rome on 17-26 June 2008. In addition, a revised analytical method of assay of nickel in polyols was prepared and included in this publication. The specifications monographs are one of the outputs of JECFA's risk assessment of food additives, and should be read in conjunction with the safety evaluation, reference to which is made in the section at the head of each specifications monograph. Further information on the meeting discussions can be found in the summary report of the meeting (see Annex 1), and in the full report which will be published in the WHO Technical Report series. Toxicological monographs of the substances considered at the meeting will be published in the WHO Food Additive Series.

Specifications monographs prepared by JECFA up to the 65<sup>th</sup> meeting, other than specifications for flavouring agents, have been published in consolidated form in the Combined Compendium of Food Additive Specifications which is the first publication in the series FAO JECFA Monographs. This publication consist of four volumes, the first three of which contain the specifications monographs on the identity and purity of the food additives and the fourth volume contains the analytical methods, test procedures and laboratory solutions required and referenced in the specifications monographs. FAO maintains an on-line searchable database of all JECFA specifications monographs from the FAO JECFA Monographs, which is available at: <http://www.fao.org/ag/agn/jecfa-additives/search.html> . The specifications for flavourings evaluated by JECFA, and previously published in FAO Food and Nutrition Paper 52 and subsequent Addenda, are included in a database for flavourings (flavouring agent) specifications which has been updated and modernized. All specifications for flavourings that have been evaluated by JECFA since its 44th meeting, including the 69th meeting, are available in the new format online searchable database at the JECFA website at FAO: <http://www.fao.org/ag/agn/jecfa-flav/search.html>. The databases have query pages and background information in English, French, Spanish, Arabic and Chinese. Information about analytical methods referred to in the specifications is available in the Combined Compendium of Food Additive Specifications (Volume 4), which can be accessed from the query pages.

An account of the purpose and function of specifications of identity and purity, the role of JECFA specifications in the Codex system, the link between specifications and methods of analysis, and the format of specifications, are set out in the Introduction to the Combined Compendium, which is available in shortened format online on the query page, which could be consulted for further information on the role of specifications in the risk assessment of additives.

Chemical and Technical Assessments (CTAs) for some of the food additives have been prepared as background documentation for the meeting. These documents are available online at: [http://www.fao.org/ag/agn/agns/jecfa\\_archive\\_cta\\_en.asp](http://www.fao.org/ag/agn/agns/jecfa_archive_cta_en.asp) .

### *Contact and Feedback*

More information on the work of the Committee is available from the FAO homepage of JECFA at: [http://www.fao.org/ag/agn/agns/jecfa\\_index\\_en.asp](http://www.fao.org/ag/agn/agns/jecfa_index_en.asp) . Readers are invited to address comments and questions on this publication and other topics related to the work of JECFA to:

[jecfa@fao.org](mailto:jecfa@fao.org)