

The amount of information given in each entry varies according to the available data. This may cause some problems to readers wishing to reassure themselves on a particular substance—does a brief entry with no details of any toxicological hazard mean that none are known or simply that the author failed to study that substance fully? The legislative status of compounds is also difficult. Some details are given but, obviously because of the constantly changing requirements, these are brief and in many cases tend to be confusing rather than helpful. On the positive side, by using lists of substances permitted in a number of countries, an extensive list has been developed. Thus within the EC countries there are as yet no agreed permitted lists of flavouring substances or enzymes. However, this book includes many common examples of these additives.

The book is certainly a useful contribution to the personal library of anyone in the food industry. People who have avoided buying the more controversial books can be reassured that by buying this publication they will not be helping those they might see as spreading confusion in this area.

**David Jukes**

**Toxicological Evaluation of Certain Food Additives and Contaminants.** WHO Food Additives Series No. 20: Prepared by the 29th Meeting of JECFA. WHO Food Additives Series No. 21: Prepared by the 30th Meeting of JECFA. IPCS, Cambridge University Press, Cambridge. 1987. 282 pp. £19.50 (for each volume). ISBN 0-521-34347X (No. 20). ISBN 0-521-359856 (No. 21).

The 29th meeting of the Joint FAO/WHO Expert Committee on Food Additives (JECFA) was held in Geneva in June 1985, and the 30th meeting in June 1986. The publication of these books by the Cambridge University Press represents a new attempt by the World Health Organisation (WHO) to ensure that the monographs contained within them become more widely known and available. Previously, similar monographs have only been available on request to the WHO. In addition to these books, the WHO publishes specifications of the additives and full meeting reports.

The books contain monographs which review the recent research conducted into a particular compound. The reason for the review is stated and followed by extracted data relating to the biochemistry of the substance and toxicological studies. The comments of JECFA are then given along with their evaluation. This evaluation usually takes the form of an assessment of the level causing no toxicological effect in particular animals and, based on this, an evaluation of the acceptable daily intake (ADI) for

man. In some cases this is only a temporary ADI and details of further studies which are required are given.

Each book contains detailed monographs on each substance considered by the relevant meeting of JECFA. Thus the 29th meeting considered a number of enzymes and enzyme-immobilizing agents (including carbohydrase, glucose isomerase from a number of sources, polyethylenimine and ethylenimine), the use of chlorine as a flour treatment agent, certain food colours (Brown FK, caramel colours in Classes I, II, III and IV and Fast Green FCF), sweetening agents (hydrogenated glucose syrups, isomalt and thaumatin) and the thickening agent tragacanth gum.

The 30th meeting considered antioxidants (BHA, BHT, TBHQ and  $\alpha$ -tocopherol), colours (curcumin and turmeric oleoresin, erythrosine, Fast Green FCF and Lithol rubine BK), the sweetening agent mannitol, certain thickening agents (ethylhydroxyethyl cellulose, tara gum and xanthan gum), and the miscellaneous additives glucono-delta lactone, sulphur dioxide and sulphites. The contaminant lead was also examined to evaluate the health risk to infants and children.

Two problems arise from these monographs. Firstly they do not provide a complete evaluation since only new data is presented for any substance. Anyone wishing to fully study the assessment of a particular substance would, in most cases, have to study a number of monographs prepared by previous meetings. The second problem is that, whilst references are given to the source of the data, in most cases they are unpublished reports. This makes any independent evaluation of the work of JECFA very difficult although it must be accepted that the quantity of data submitted is very great and publication of it all would be an immense task.

The individuals who make up JECFA can be seen by the publication of these monographs to be performing an essential task. We all require our food additives to be safe. An international evaluation by independent experts goes a long way towards this goal. The wider availability of these documents is to be welcomed.

**David Jukes**