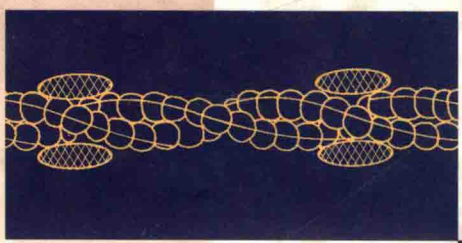
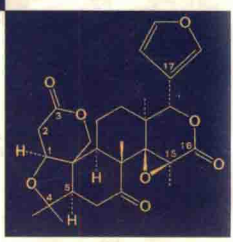
Erich Lück
Martin Jager

Antimicrobial Food Additives

Characteristics, Uses, Effects



2nd. Revised and Enlarged Edition



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2nd revised and enlarged edition
translated from the German by S. F. Laichena

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Dr. phil. nat. Erich Lück
Robert-Stolz-Straße 102
D-65812 Bad Soden

Dr. rer. nat. Martin Jager
Hoechst Aktiengesellschaft
Abteilung Lebensmitteltechnik
Postfach 80 03 20
D-65926 Frankfurt

Translation:
S. Laichena
15 Woodbury Park Road
Ealing
London W13 8DD
UK

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For Ulrike, Lena and Jonas

Preface to the second English Edition

Since the publication of the first English translation of this book about 15 years ago, a great deal of new information on antimicrobial food additives has emerged in the fields of microbiology, toxicology and analysis. These aspects have been given prominence in this edition.

Despite a widespread and in most cases emotive aversion to food additives in general and preservatives in particular, the commercial use of preservatives is increasing rather than declining. There are many reasons for this: the growing popularity of convenience foods is certainly as important as changes in consumer awareness, against a background of continuous rises in the incidence of food infection and food poisoning.

The structure of the book remains unchanged. Like the previous edition it consists of two sections. The first section contains information applicable to preservatives in general. The second section describes the properties and applications of the various preservatives. The chapters are grouped into those on inorganic and organic preservatives respectively.

Each chapter has been thoroughly revised and updated. Preservatives that have become less important and those of little commercial relevance have been summarized fairly briefly in a chapter on "Other preservatives". This edition still focuses primarily on the commercial use of preservatives in the food sector. The book is aimed at those involved on the practical side in the food industry who have an interest in the scientific aspects of their work. Information on the regulatory status has deliberately been confined to the main points since a detailed and up-to-date description cannot be given against a background of constantly changing regulations.

Autumn 1996 Dr. Erich Lück, Dr. Martin Jager

Foreword to the first English Edition

Although the preservation of food by chemical techniques is such an important field of research in food science and also a major branch of the food industry, no monograph on the subject has hitherto existed in modern literature. Knowledge concerning this field is widely dispersed in a multiplicity of journals and handbooks. The foremost works of reference on food microbiology and food technology treat the preservation of food by chemical means only as a peripheral aspect.

This book first appeared as a German-language publication in the Federal Republik of Germany in 1977, since when it has sold widely throughout Europe. It reviews all aspects of food preservation by chemical techniques, the majority of which involve the use of chemical additives. This, the first English-language edition, is more than a straight translation from its Geman predecessor since the text has been updated in the light of new knowlegde aquired in the interim.

Essentially, this book is a collection of facts augmented by information drawn from literature but also contains much of the author's personal experience. It consists of two sections:

1. a general section dealing with aspects of importance to all preservatives and
2. special chapters on the properties and uses of individual preservatives.

The sequence of chapters in the second edition of the book follows the usual system employed in inorganic and organic chemistry. A separate chapter is devoted to each substance that is, or used to be, of major practical importance. Preservatives which have attained a minor degree of importance at some time are then summarized in a further single chapter. This book also deals with those disinfectants and gases which may still be regarded as preservatives in the broader sense of the term because they are used for determination of foods. In other respects the text confines itself strictly to food preservation; only brief reference is made to food analysis since good books on the analysis of preservatives in foods already exist.

The book is aimed mainly at the practical man in the food industry with an interest in the scientific aspects of his work. The scientific principles of food preservatives are all explained in sufficient detail for a clear understanding of the way they are used. In addition, the book is intended as a reference work in which prominence is given to the major interrelationships in its field of reference. In the chapters dealing with the individual preservatives a deliberate attempt has been made to provide systematic description enabling the student or other reader to obain a rapid overall picture. Finally, in deciding on the book's layout and scope it has been born in mind that a book of this type can also serve as a source of information for government authorities, medical practitioners, nutritional scientists and, not least, the educated layman. It is hoped the book will help bring objectivity to all emotio-

nally charged discussion on the use of preservatives in foods and return such discussion to a scientific level.

The author would like to record his sincere gratitude to Grant F. Edwards, Manager of the Translation Department of Hoechst UK, for his careful and conscientious translation work. Thanks are also due to the publishers, notably Dr. Boschke, for their critical comments, of which due account has been taken in both the German and English editions, as well as for their promptitude in completing the task of publication.

Spring 1980 Dr. Erich Lück

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