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Book Reviews

The Alveograph Handbook. By Hamed Faridi and Vladimir F. Rasper. American Association of Cereal Chemists Inc., 1987. vii + 56 pp. ISBN 0-913250-52-X. Price: US$52·80.

This handbook covers all of the major aspects of the Alveograph and its use. It includes the functioning of the actual instrument, theoretical aspects of dough rheology and works its way through to calibration, maintenance and trouble shooting. While much of this, by its nature, reads like a 'technical manual' it contains many interesting and useful points. In particular, Chapter two, 'Theoretical Aspects of the Alveograph' is well written and researched and would make easy reading even to the non-rheologist. The literature cited in this section includes many of the early historical references and would make an excellent 'core' of reading for anyone interested in dough testing.

The handbook itself is generally well written and presented; however, some of the diagrams and figures are poorly reproduced. A little more care and they would have been much clearer and more useful to the reader.

In conclusion, I would suggest that this book is a must for anyone using or wishing to use the Alveograph and should go some considerable way to pointing out the potential 'pitfalls' in its use and help to eliminate discrepancies that occur in the interpretation of Alveograph data by different operators.

A. E. Bell

Biscuits, Cookies and Crackers—Vol. 1. The Principles of the Craft. By Peter Wade. Elsevier Applied Science Publishers, London, 1988. xii + 176 pp. ISBN 1-85166-187-5. Price: £47·00.

Biscuit manufacture on a large scale will only be successful if those who

control the machinery and the machinery itself work together to produce quality biscuits of uniform weight, shape and thickness. Some errors made near the start of manufacture will cause irreversible problems later on. It is therefore very important that everyone involved in biscuit production has at least the depth of knowledge contained within this 'very-readable' little book.

The book has been written with either a newcomer to the biscuit industry or with the person supporting the biscuit industry (perhaps as an ingredient or equipment supplier) in mind. It is not aimed at the experienced biscuit maker and therefore the reader need only have an elemental knowledge of carbohydrates, proteins and lipids. The basic principles underlying the mechanised craft of biscuit manufacture (and, very briefly, wafer production) is outlined in eight chapters spanning 176 pages. Each chapter is clearly sectioned and well referenced and the book ends with a useful index.

The author begins tackling the subject by defining what a biscuit is and listing which ingredients are essential for the main types of biscuit doughs. The author then goes on to outline the basic biscuit-making processes, i.e. ingredient metering, dough mixing, formation of the dough piece and baking and cooling. The composition of doughs and the essential properties of the principal ingredients, i.e. wheat flour, fat, sugar, minor ingredients and water, are discussed in detail (wheat, and its flour components, are considered in the greatest detail).

Other important topics discussed in this book are: the changes that occur during biscuit dough processing and biscuit baking; the types of equipment used for mixing, sheeting, laminating, moulding and cutting the dough; the effects of standing the dough between mixing and machining; the principles behind types of ovens available for baking and the types of experimental techniques used by the industry to investigate the biscuit making process.

Baking can be described as a mixture of science and art. The greatest scientific input into biscuit manufacture must be the use of sulphur dioxide and the sulphites, proteases, etc., as dough conditioners. The art lies in the control of the many physical changes that occur during baking, cooling and storage. As consumer interest is being directed more and more towards the use of additives in foods, it is important that processors are aware of why these 'modifiers' are included in the formulations and where the art cannot succeed without the science. This book is an excellent source of the answers. The author devotes a whole chapter to the use of sulphur dioxide as a conditioner for hard sweet doughs. Clear diagrams, black and white photographs and photomicrographs aid the reader in following the changes that occur and understanding all the topics discussed in the book.

B. Brockway