



# ***International Commission on Microbiological Specifications for Foods (ICMSF)***

## **Introducing ICMSF**



***Martin Cole***

***ICMSF Symposium on Innovative Approaches to  
Current & Innovative Approaches in Microbial Food Safety  
Management, October 21-22, New Delhi, India***





# Founded in 1962 through International Union of Microbiological Societies (IUMS)

## ICMSF Founding Members

***Dr. F.S. Thatcher, Canada***

***Dr. C. Cominazzini, Italy***

***Dr. M. Ingrams, UK***

***Dr. R. Paul Elliott, USA***

***Dr. C. E. Dolman, Canada***

***Dr. K. Lewis, USA***

***Dr. G.G. Slocum, USA***

***Dr. H.E. Goresline, U.S.A./Austria***

***Prof. D.A.A. Mossel, Netherlands***

***Mrs. Mildred Galton, USA***

***Dr. Leon Buchbinder, USA***

***Dr. Holger Lundbeck, Sweden***

***Dr. Betty C. Hobbs***

***United Kingdom/India***

***Dr. R. Buttiaux, France***







Annual meeting as a working party, since 1962, 39 meetings in 19 countries



Dubrovnik, Yugoslavia, 1969





# About ICMSF

- ICMSF membership currently consists of 18 food microbiologists from 12 countries.
- Members' professional experience includes research, process development, public health, agriculture, food technology, quality control, and education.
- We also seek assistance from an extensive network of consultants considered to be experts in various areas of food microbiology.
- Members, as well as consultants, are selected based on their technical expertise, not as national delegates.
- All work is voluntary and without honoraria.
- Partners, ILSI, FAO, WHO, IUFoST







# Current Membership

- Dr. W. Anderson (Wayne) Ireland
- Dr. L.E.C.M. Anelich (Lucia) South Africa
- Dr. B.L. Buchanan (Bob) United States
- Dr. M. Cole (Martin) United States
- Dr. J.-L. Cordier (Jean-Louis) Switzerland
- Dr. R. Dewanti (Ratih) Indonesia
- Dr. J.M. Farber (Jeff) Canada
- Dr. R.S. Flowers (Russ) United States
- Dr. B.D.G.M. Franco (Bernadette) Brazil
- Dr. L.G.M. Gorris (Leon) United Kingdom
- Dr. L. Gram (Lone) Denmark
- Dr. F. Kasuga (Fumiko) Japan
- Dr. A.M. Lammerding (Anna) Canada
- Dr. X. Liu (Xiumei) China
- Dr. M. Potter (Morrie) United States
- Dr. T. Ross (Tom) Australia
- Dr. K.M.J. Swanson (Katie) United States
- Dr. M.H. Zwietering (Marcel) The Netherlands

6 From Academia  
5 From Industry  
7 From Government  
**18 Total from 12 Countries**





# About ICMSF

- To address important regional issues, the ICMSF has established three regional Subcommissions:
  - Latin American
  - South-East Asian
  - Chinese (North-East Asian).
- These Subcommissions follow the operating principles of the ICMSF while addressing microbiological problems particular to their regions.





# Discussion documents for Codex Alimentarius

- Revised principles for the establishment and application of microbiological criteria for foods (1995)
- The control of *L. monocytogenes* in foods (1995)
- Establishment of sampling plans for microbiological safety criteria for foods in international trade (1996)
- Recommendations for the management of microbiological hazards for foods in international trade (1996)
- The role of Food Safety Objectives in the management of the microbiological safety of food according to Codex documents (2001)
- Use of Epidemiologic Data to Measure the Impact of Food Safety Control Programs (2005)
- Microbiological criteria for powdered infant formula (2005)





# ICMSF - Recommendations

- The recommendations of ICMSF have no official status, the official promulgation of such recommendations being nationally the province of governments and internationally the province of the United Nations and its agencies such as WHO and FAO.
- Internationally advise of ICMSF has been passed to organisations such as WHO, FAO, ISO







# “Microorganisms in Foods” Series

**MICRO-  
ORGANISMS  
IN FOODS 1**  
Their  
significance  
and  
methods of  
enumeration

Second edition

**MICRO-  
ORGANISMS  
IN FOODS 2**  
Sampling for  
microbiological  
analysis:  
Principles and  
specific  
applications

Second edition

ICMSF

**MICROBIAL  
ECOLOGY OF FOODS**

Volume 1  
Factors Affecting Life and  
Death of Microorganisms

**MICROBIAL  
ECOLOGY OF FOODS**

Volume 2  
Food Commodities

INTERNATIONAL COMMISSION ON  
MICROBIOLOGICAL SPECIFICATIONS FOR FOODS

ICMSF  
HACCP in  
Microbiological  
Safety  
and Quality  
Blackwell Science

**MICRO-  
ORGANISMS  
IN FOODS**

**5**

MICROBIOLOGICAL  
SPECIFICATIONS OF  
FOOD PATHOGENS

ICMSF



BLACKIE ACADEMIC & PROFESSIONAL

**MICRO-  
ORGANISMS  
IN FOODS**

**6**

MICROBIAL  
ECOLOGY OF FOOD  
COMMODITIES

ICMSF

**MICRO-  
ORGANISMS  
IN FOODS**

**7**

MICROBIOLOGICAL TESTING  
IN FOOD SAFETY MANAGEMENT

ICMSF





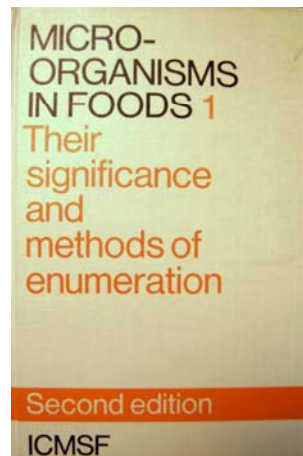
# Microorganisms in Foods

## 1: Significance and Methods of Enumeration

Concise overview of significance of microorganisms and their toxins in foods.

An attempt to promote standard / equivalent methods for important foodborne microbes.

- 2nd ed. (1978) reprinted 1982, 1988, with revisions. University of Toronto Press. ISBN: 0802022936



**Caracus, Venezuela, 1974**



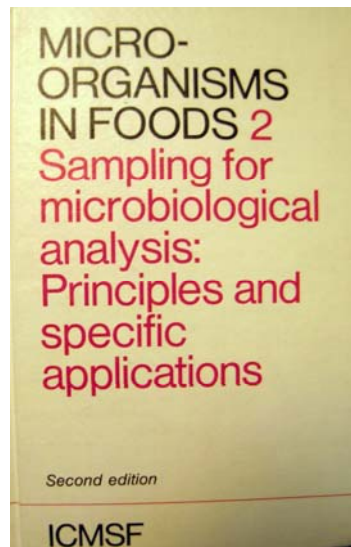
# Microorganisms in Foods

## 2: Sampling for Microbiological Analysis: Principles and Specific Applications

The statistical principles underlying attributes sampling plans and their application to foods.

— 2nd ed. (1986) University of Toronto Press.

ISBN: 0802056938 (out of print)



**Bedford, England, 1983**





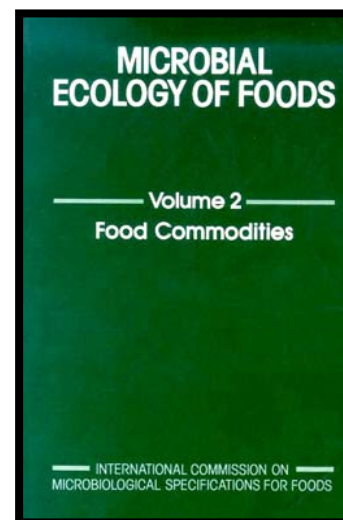
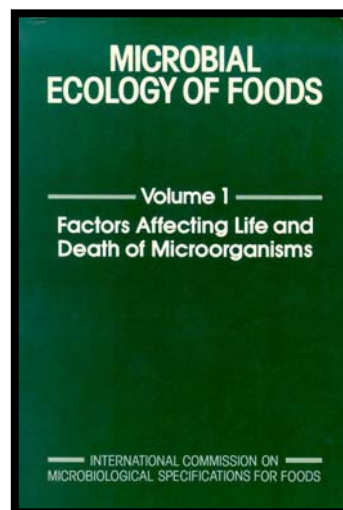
# Microorganisms in Foods

## 3: Microbial Ecology of Foods

Health risks and spoilage brought into focus.

How food processes, ingredients, and product characteristics affect the microflora of foods.

- vol. 1: Factors affecting life and death of microorganisms (ISBN: 0123635012).
- vol. 2: Food commodities (ISBN: ....5020).



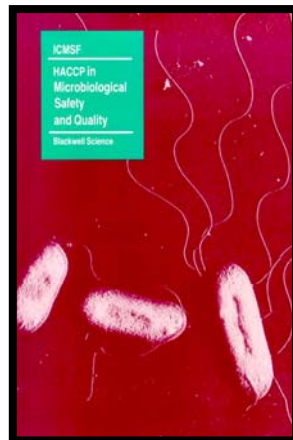


# Microorganisms in Foods

## 4: Application of the Hazard Analysis Critical Control Point (HACCP) System to Ensure Microbiological Safety and Quality

Developing and implementing HACCP,  
with 37 generic HACCP plans.

— 1988. Oxford: Blackwell Scientific Publications.



**Roskilde, Denmark, 1986**

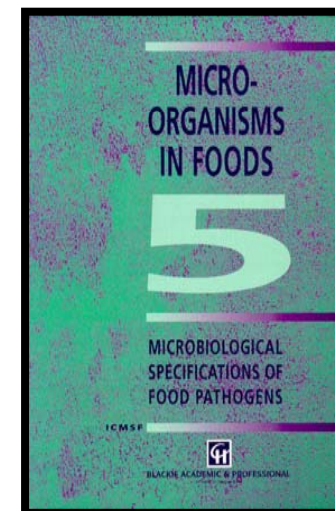


# Microorganisms in Foods

## 5: Characteristics of Microbial Pathogens

Growth, death, and survival characteristics of bacteria, viruses, moulds, parasites in relation to HACCP: 26 overviews and easy-to-use tables.

- 1996 Aspen Publishers Inc., Gaithersburg, MD.  
ISBN: 041247350X



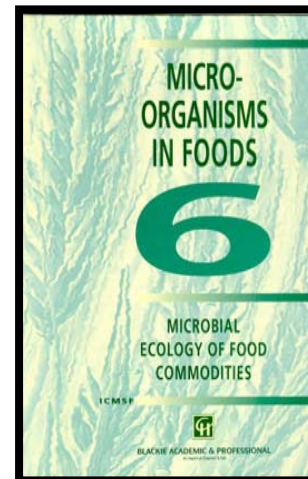




# Microorganisms in Foods

6: Microbial Ecology of Food Commodities.  
Revised and updated from Book 3, vol. 2.  
Comprehensive assessment of safety and  
spoilage of 16 food commodities: raw, frozen,  
cured, fermented, dried, etc.

- 1998 Aspen Publishers Inc., Gaithersburg, MD.  
ISBN: 0751404306





# Microorganisms in Foods

## 7: Microbiological Testing in Food Safety Management (2001)

revised and expanded from Book 2, part 1.

Kluwer Publishers Inc



Melbourne, Australia, 1999

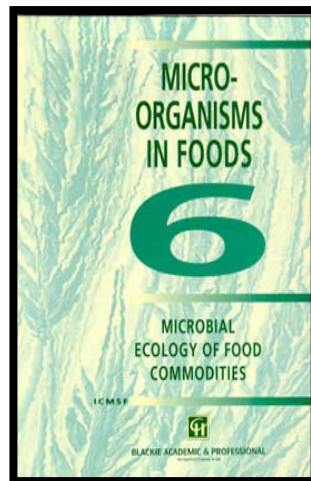


# Microorganisms in Foods

## 6: Microbial Ecology of Food Commodities.

Revised and updated from 1998 version

- Includes example control measures at end of each commodity chapter
- Plus an Index!



Lugano, Switzerland, 2003





# New Work: Microorganisms in Foods: Book 8

8. Use of data for assessing process control and product acceptance
- Chair Editorial Committee- Katie Swanson
  - Scope- Provide guidance on appropriate and inappropriate testing of food processing environments, during processing, and finished product testing. Expand on the use of trend analysis and across lot data.





# Use of data for assessing process control and product acceptance

- **Part 1 – Principles of Using Data in Microbial Control**
- Utility of Microbiological Testing for Safety & Quality
- Food safety management principles
- Validation of control measures
- Verification of Process Control
- Verification of Environmental Control
- Corrective Action to Re-establish Control
- Microbiological Testing in Customer-Supplier Relations
- Methods and Laboratory Performance
- **Part 2 – Specific Applications to Commodities**



# Summary

- Long history and important contribution to food safety
- Book series, timely advances in principles, Methods, Sampling Plans, HACCP, Microbial ecology, FSOs
- New work, full circle role of criteria
- New look, but same ideals





For more information see  
[www.icmsf.org](http://www.icmsf.org)



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 International Commission on Microbiological Specifications for Foods (ICMSF)

> Evaluating issues and making timely contributions on newly emerging food safety concerns.

CALENDAR OF EVENTS IN THE NEWS MEMBERS PUBLICATIONS CONTACTS

**PURPOSE**

Our primary goal is to provide timely, science-based guidance to government and industry on appraising and controlling the microbiological safety of foods. The primary objectives of ICMSF include:

1. Provide the scientific basis for microbiological criteria and to promote principles for their establishment and application.
2. Overcome the difficulties caused by nations' varying microbiological standards and analytical methods.

**> NEWS AND EVENTS**

[A simplified guide to understanding and using Food Safety Objectives and Performance Objectives](#) has been posted in four languages

[Microorganisms in Foods 6: Microbial Ecology of Food Commodities](#), 2nd edition, 2005, ISBN: 0-305-48675-X is now available from Kluwer Publishers.

**> DOWNLOADS**

[Microbiological sampling plans](#) (link to file sampling plan): a tool to explore ICMSF recommendations [Download Standard Program](#) (English link to sampleplans1\_02.xls, 1.28M) [Download German Program](#) (German link to sampleplansGerman1\_02.xls, 666K)

**CODEX ACTIVITIES**

View recent developments in food standards, guidelines and related texts. [Click here](#)

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