



International Commission on Microbiological
Specifications for Foods (ICMSF)

www.icmsf.org

IMPORTANCE OF SAMPLING AND TESTING IN THE CONTEXT OF GOVERNMENT AND INDUSTRY

Workshop at Kenya Bureau of Standards

21 March 2024, Nairobi

09:00 – 13:00



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Proposed Agenda

1. Introductions of ICMSF and KEBS
2. Food safety risk and principles of sampling & testing of microorganisms in foods.
Marcel Zwietering, Wageningen University, The Netherlands
3. Importance of sampling and testing for verification of food safety management system performance. **Peter McClure**, Consultant, United Kingdom
4. Importance of sampling and testing, especially, microbiological criteria in the regulatory context, **Leon Gorris**, Food Safety Futures, The Netherlands
5. Importance of existing Codex's food safety risk-based metrics and innovation in such metrics, **Wayne Anderson** (Food Safety Authority of Ireland, Ireland)
6. Q&A/Free flowing discussion



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Disclaimer: The individuals presenting today represent ICMSF. Their statements are personal views and are not reflective of the policies or positions of the various organizations or agencies that they are affiliated with



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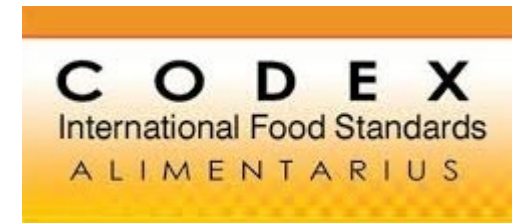


**International
Science Council**



www.icmsf.org

“Observer” with
Codex Alimentarius
for over 40 years



Links to WHO



Links to FAO



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ICMSF's mission

Be a leading source for independent and impartial scientific concepts, that when adopted*, by governmental agencies and/or food industry, may help reduce the incidence of microbiological food-borne illness and food spoilage worldwide and facilitate global trade.**

*ICMSF recommendations have no official, regulatory status;

**They are the *best science* view(s) of the collective ICMSF membership



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Our books mirror the evolution of food safety management



1960s – 1980s
Methods and Testing



1980s-2000s
Microbial Ecology
HACCP



2000s-2020s
Risk Management



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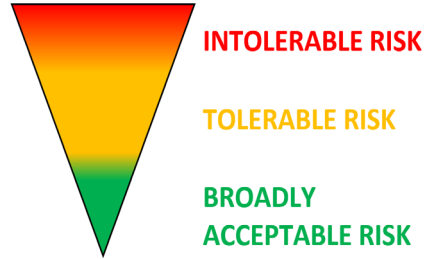
**Microbiological Criteria =
“15 Cases lot acceptance”
concept**

**Inputs for a Food
Safety Management
Systems**

**Risk-based
Management and
Food Safety Metrics
(FSO, PC, PO, MC)**



Risk Analysis: modern, systematic approach to standard setting, including risk-based metrics

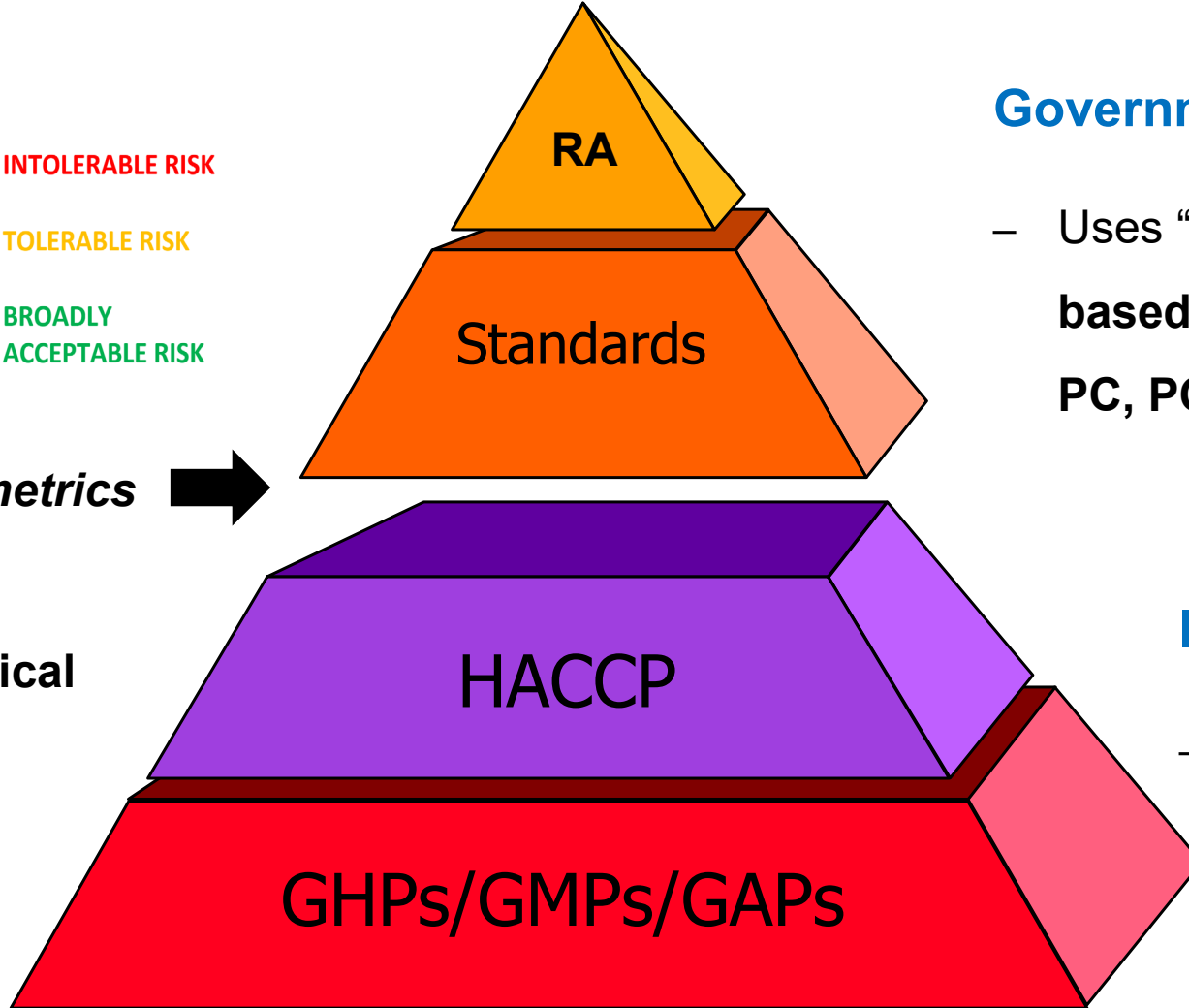


Risk-based metrics →

e.g.,
**Microbiological
criteria**

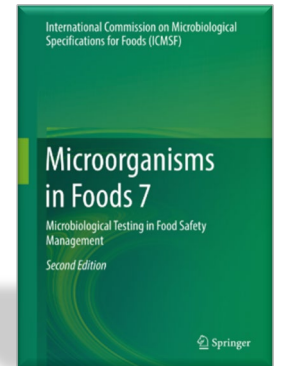


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Government:

- Uses “**Risk Analysis**” approach to set **risk-based standards**, possibly incl. **metrics (FSO, PC, PO, MC)**



Industry:

- **Meets risk-based standards & metrics** through using Good Practices, HACCP and other food safety management components

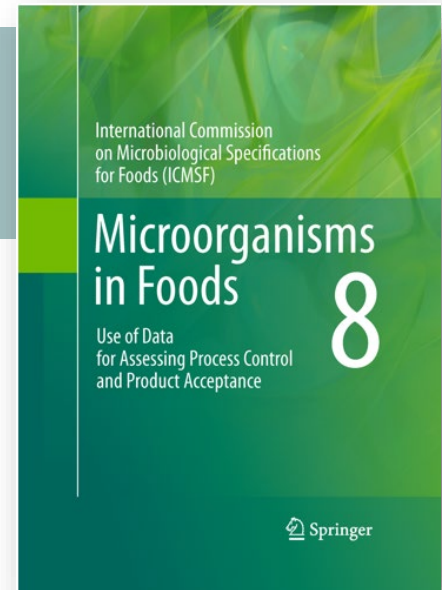


Latest ICMSF commodity Advice

Part I: Principles of using Data in Microbiological Control

Part II: Application of Principles to Product Categories

- | | |
|--|--|
| 8: Meat Products | 18: Oil- and Fat-Based Foods |
| 9: Poultry Products | 19: Sugar, Syrups and Honey |
| 10: Fish and Seafood Products | 20: Non-alcoholic Beverages |
| 11: Feeds and Pet Food | 21: Water |
| 12: Vegetables and Vegetable Products | 22: Eggs and Egg Products |
| 13: Fruits and Fruit products | 23: Milk and Dairy Products |
| 14: Spice, Dry Soups and Asian Flavourings | 24: Shelf-Stable Heat-treated Foods |
| 15: Cereals and Cereal Products | 25: Dry Foods for Infants and Young Children |
| 16: Nuts, Oilseeds, Dried Legumes and Coffee | 26: Combination Foods |
| 17: Cocoa, Chocolate and Confectionery | |



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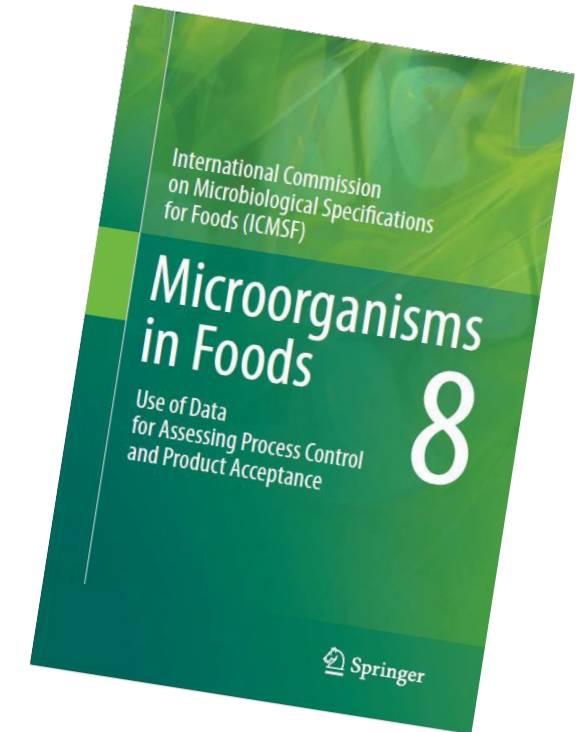
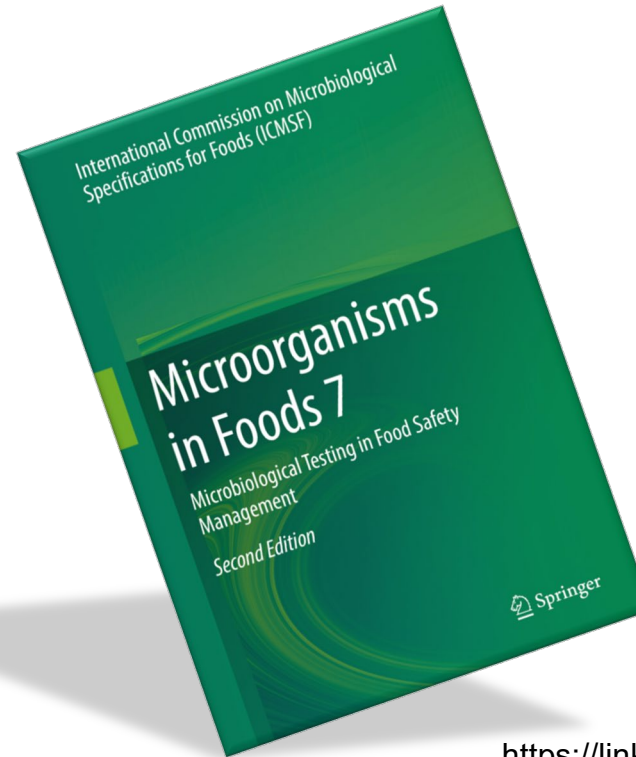


Summary: Risk-based Food Safety Management

- “Safe” means “no undue harm” or “its an acceptable risk”
- Risk analysis provides a framework for managing hazards proportional to the risk faced by consumers
- Microbiological criteria / sampling plans are useful to verify the performance of (parts of) an operational food safety management system

Book 7:

<http://www.springer.com/la/book/9783319684581>



Book 8:

<https://link.springer.com/book/10.1007/978-1-4419-9374-8>



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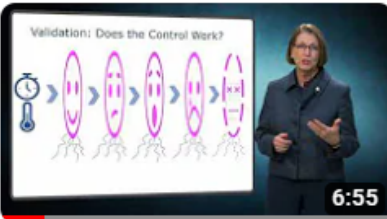
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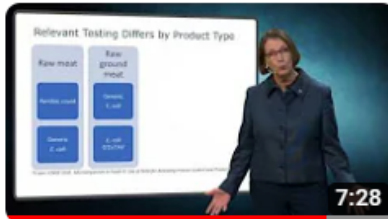
ICMSF 2017 01 "History of ICMSF", Martin B. Cole



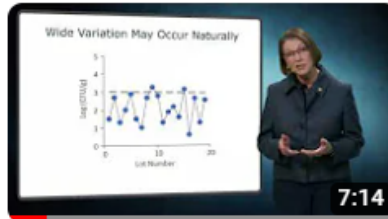
ICMSF 2017 02 "Microbiological Testing...



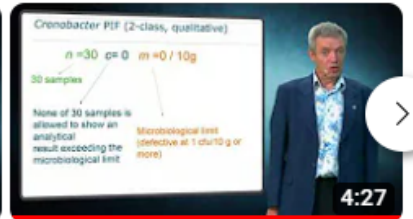
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ICMSF 2017 04 "Microbiological testing for...



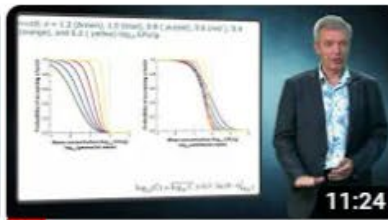
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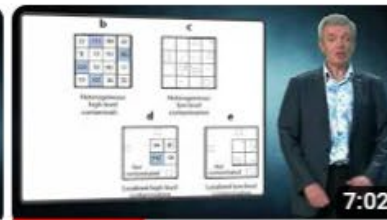
ICMSF 2017 06 "Anatomy of a sampling plan", Marcel H...



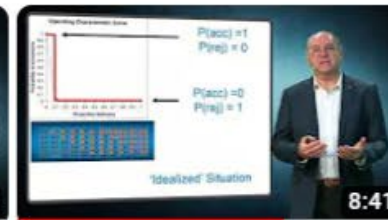
ICMSF 2017 07 "The ICMSF cases", Leon G.M. Gorris



ICMSF 2017 09 "Microbiological testing and...



ICMSF 2017 08 "Microbiological Testing an...



ICMSF 2017 10 "Examples sampling plan performance...



ICMSF 2020 11 "WhySoManySamplingPlan...



ICMSF 2020 12 "Introduction ICMSF tool", Leon G.M. Gorris



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