Codex HACCP and ISO 22000:2005

Similarities and Differences

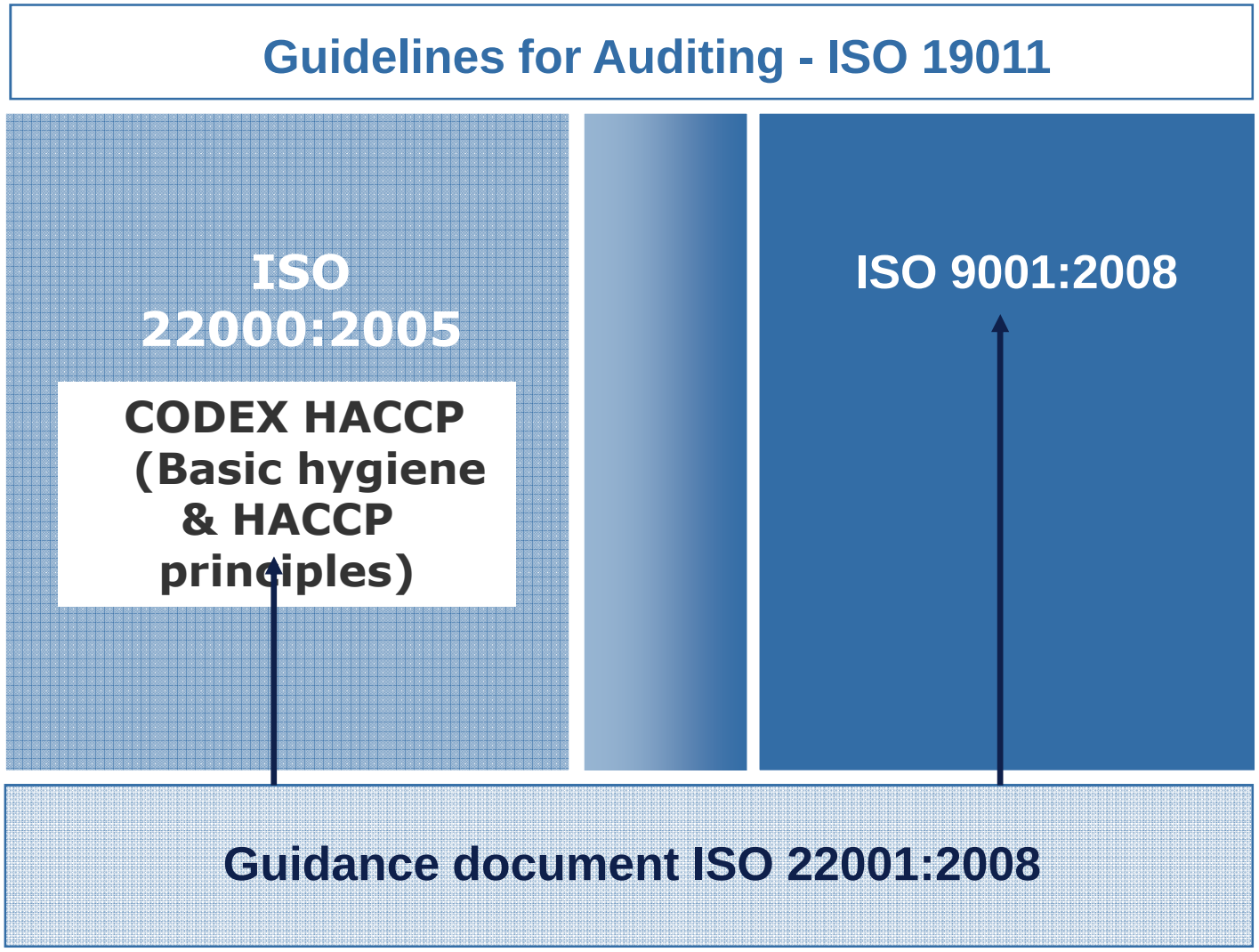
What is the difference between

- An auditable standard
- A guidelines

- **Auditable standard**
  A standard specification against which an independent audit can be conducted

- **Guidelines**
  Guidelines or best practices available for selection for achieving a certain objective

Correlation between various standards

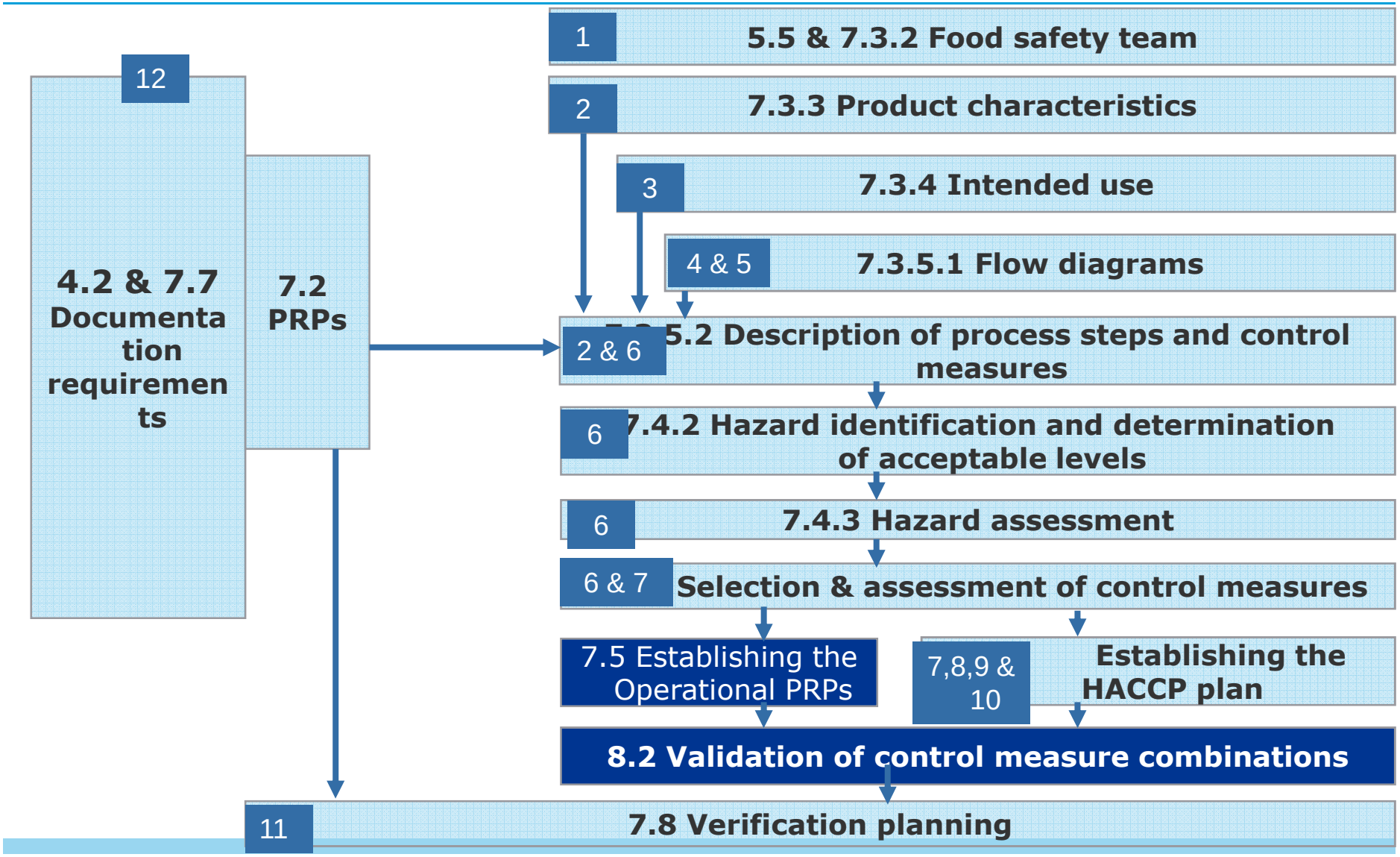


Co-relation between various standards

The ISO 22000 Family

ISO 22001:2007	Guidance for Application of ISO 9001:2000 in food & drink industry (Previously ISO 15161:2002)
ISO 22003:2007	Food safety management systems – Requirements for bodies providing audit and certification of food safety management systems
ISO 22004: 2006	Guidance on Application of ISO 22000:2005
ISO 22005: 2007	Guidance on Traceability & Transparency in food chain
ISO/DIS 22006	Quality Management System - Guidelines on the application of ISO 9001:2000 for crop production
ISO/WD 22008	Food Irradiation – Good processing practices for irradiation of foods intended for human consumption

Codex HACCP vs ISO 22000



ISO 22000 Preliminary Steps

7.3.2 Food Safety Team

7.3.3 Product Characteristics

- Raw Material, Ingredients, In-process material
- End Product
- **Product contact surfaces**

7.3.4 Identify intended use

7.3.5 Flow diagrams, process steps and control measures including on site verification of flow diagram.

Steps in Hazard Analysis

Step 1	Hazard Identification (Biological, Chemical & Physical) and determination of acceptable levels
Step 2	Conduct Hazard Assessment & determine the method (Probability & Severity)
	Is elimination or reduction of hazard essential to the production of safe food — No control measure required
Step 3	Selection of appropriate combination of control mure
	Validation of control measure combination
Step 4	Assessment of control measures using 7 parameters & determine the methodology
Step 5	Categorization of control measures using methodology in **OPRP or HACCP Plan (CCP)**

ISO 22000 Assessment parameters

Hazard Assessment

- Probability
- Severity

Control Measure Assessment

- Probability of failure of control measure
- Severity in case of failure
- Feasibility of monitoring control measure
- Is there Successive control measure in food chain
- Synergetic effect of other control measures
- Impact on hazard control
- Is control measure specifically designed?

Example of methodology of Hazard assessments

Level	Marks	Probability of Occurrence of hazard	Severity of hazard
HIGH	3	Often occurrence Eg : Occurrence once in every month	High (life-threatening) Examples include illnesses caused by Clostridium botulinum, Salmonella typhi, Listeria monocytogenes, Escherichia coli 0157:H7, Vibrio cholerae, Vibrio vulnificus, paralytic shellfish poisoning, amnesic shellfish poisoning
MEDIUM	2	Moderate Eg: Occurrence once in 4 to 6 months	Moderate (severe or chronic) Examples include illnesses caused by Brucella spp., Campylobacter spp. Salmonella spp., Shigella spp.. Streptococcus type A, Yersinia entercolitica, hepatitis A virus, mycotoxins, ciquatera toxin
LOW	1	Marginal Eg: May occur once in a year	Low (moderate or mild) Examples include illnesses caused by Bacillus spp., Clostridium perfringens, Staphylococcus aureus, Norwalk virus, most parasites, histamine-like substances and most heavy metals that cause mild acute illnesses
Score: Probability x Severity greater than …… will be significant.			

Example of control measure assessment methodology

Probability of failure of CM(A)	High (3) Often : once in a month	Medium (2) Occasionally : once in 6 months	Low (1) Marginal: maybe once in a year
Consequences in case of failure of CM (B)	High (3) Effect on end product	Medium (2) May effect on end product	Low (1) No effect on end product
Feasibility for Monitoring (C)	High (3) Continuous	Medium (2) Defined frequency	Low (1) Not feasible to monitor
Impact on hazard control (D)	High (3) Prevent	Medium (2) Reduce	Low (1) Eliminate
Is there successive control measure? (E)	Yes: 0	No: 3	
Is control measure specifically designed? (F)	Yes: 3	No: 0	
Is there synergistic effect with other CM? (G)	Yes: 0	No: 3	

Low : 4+3+3+3 = 13
Medium: 8+3+3+3 = 17 - OPRP
High : 12+3+3+3 = 24 - CCP

Legal compliance and requirements of the standard

- Legal compliance involves compliance with the requirements of national and international legislation and regulations. Legal compliance is mandatory and basic requirement.

- Compliance with applicable Codex standards is recommended.

- Compliance with ISO standards is mandatory to the extent of fulfillment of certification requirements and is beyond meeting the legal requirements.

Other differences

- Emergency preparedness
- Verification of food safety system including internal audits
- Traceability, Withdrawal & recall
- Corrections & corrective actions
- Validation of control measure combinations
- Continual improvement

Thank You !!!

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