CENTERRA

Sanitation, ISO 9001:2000 and HACCP Implementation for Wine Bottling Lines: Defined and Measured

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Objective

- Develop better understanding of ISO 9001:2000, HACCP, and Line Sanitation
- How do they all interrelate and compliment each other?

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Topics

- What is ISO
- What is HACCP
- How does a sanitation process fit into ISO and HACCP
- Sanitation defined and measured

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What is ISO 9001:2000

- International Standards Organization – ISO
- An international quality standard against which any firm can measure its quality management system, procedures, and commitment
- Provides a standardized, internationally accepted Quality Management System -- how you do what you do to ensure consistency and high-quality products.
- Scope: From incoming components and materials to customer.
- Providing for
  - Continuous improvement
  - Emphasizing defect prevention
  - Reducing variation and waste in supply chain
  - Employee involvement

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ISO 9001:2000
Eight Management Principles

- Customer focus
- Leadership
- Involvement of people
- Process approach
- System approach to management
- Continual improvement
- Factual approach to decision making
- Mutually beneficial supplier relationships

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ISO 9001:2000

0 - Introduction
1 - Scope
2 - Normative Reference
3 - Terms and Definitions
4 - Quality Management System Requirements
5 - Management Responsibility
6 - Resource Management
7 - Product Realization

What do you really do and how do you do it?

8 - Measurement, Analysis, and Improvement

Verification and validation of system…"Say what you do, and do what you say".

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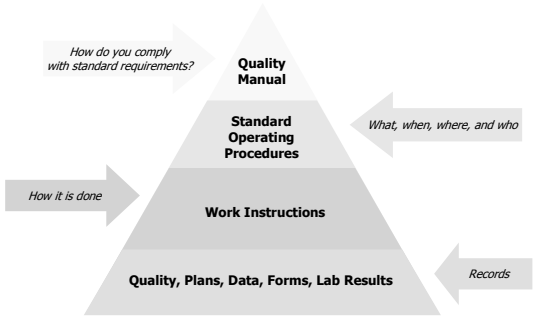
The ISO 9000 Quality Pyramid



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Benefits of ISO 9001:2000

- Increase competitiveness in today's job market
- Provides consistency in work practices and final product
- Gets away from "tribal" knowledge procedures
- Defines responsibilities and accountability
- Strengthen organization/customer confidence

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What is HACCP?
Hazard Analysis Critical Control Point

- HACCP is a world-recognized approach to the identification, evaluation, and control of potential product safety hazards.
- Providing for
  - Liability control
  - Reduced waste
  - Reduced down time
  - Increased efficiencies

  } Increased savings

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The Seven Principles of HACCP

(1) Conduct a Hazard Analysis

- Process flow: Grapes to finished wines
- Hazards
  - Biological (toxins, fungus, mold, etc.)
  - Chemical (pesticides, cleaning agents, etc.)
  - Physical (glass, dirt, etc.)

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The Seven Principles of HACCP
(continued)

(2) Determine Critical Control Points

- Any area in the process where there is a high probability of improper contact that may cause, allow, or contribute to hazard or filth in the final product.
- Detailed evaluation

(3) Establish Critical Limits

- A maximum or minimum value to which a biological, chemical, or physical hazard must be controlled at a Critical Control Point in order to prevent, eliminate, or reduce to an acceptable level a product safety level.
- A Critical Control Point will have at least one Critical Limit.

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The Seven Principles of HACCP
(continued)

(4) Establish Monitoring Procedures

(5) Establish Corrective Actions

(6) Establish Verification Procedures

(7) Establish Records and Documentation

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HACCP
(continued)

- Not just microbe free…
  - Employee practices, health, and hygiene
  - Product and container contact areas
  - Environment
  - Product specifications
  - Equipment

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ISO and HACCP: How They Compliment Each Other

- The Quality Management System (ISO 9001:2000) lays the groundwork for developing a successful process – SOPs, Forms, Work Instructions, Document Control.
- HACCP provides specific guidelines for your food safety program.
- Sanitation is defined in the Quality Management System (ISO 9001:2000) and is one of the tools that can be used to meet the HACCP requirements.
- Today we are focusing on wine production and bottling.

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Sanitation

- Successful bottling line sanitation begins in the wine cellar.
  - Dirty tanks and transfer hoses can undo a stellar sanitation of the bottling lines.
  - In our environment, yeast are everywhere because we ferment 52 weeks out of the year
- Minimum, Primary Goal
  - Certainty that the wine in the bottles is free from contamination of micro-organisms that can cause degradation of wine quality.
- Maximum Goal
  - An entire winery that is free of micro-organisms that are harmful to the wine's quality and shelf life.

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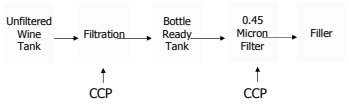
Cellar Sanitation Process Defined

- What process is going to be used (i.e. full chemical, chlorine, or hot water, etc.)
- Define and document the process: who, when, where, how, and limits

Example:



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Cellar Sanitation Process Measured/Monitored

- Basic tools to monitor sanitation in Cellar:
  1) Swabbing after sanitizing equipment
  2) Titrations to verify chemical concentrations (i.e. tank rinse)
  3) Pre-bottling plating of product in bottle-ready tank
  4) Filter sanitation and integrity testing

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Bottling Sanitation Process Defined

- What process is going to be used (i.e. full chemical, chlorine, or hot water)
  - Canandaigua Winery utilizes a four-step CIP sanitation (wash, rinse, sanitize, rinse)
- All bottling sanitation is documented in SOPs, Work Instructions, and Master Sanitation Schedules – all defined in the Quality Management System.
- Sanitizing is not just cleaning the fillers. There are numerous sources of contamination:
  - Airborne exposure to open, unfilled bottles and filled, unsealed bottles
  - Product contact surfaces, bottles, caps and/or corks
  - Non-product contact surfaces: bottle cleaners, fillers, closure equipment, conveyors
  - Breakage on bottling lines poses a physical hazard.
  - Maintenance work done to areas of product contact should be sanitized appropriately after work has been completed (i.e. filler stems).

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Bottling Sanitation Process Monitored/Measured

- Basic tools to monitor sanitation in Bottling:
  - Chart/document critical temperature and hold times
  - Titration to verify chemical concentrations
  - Swabbing of equipment
  - Microbiology of finished product throughout the run (at start, at end, and at defined intervals between)
    - Set limits on microbiological analysis; need to be defined and realistic

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Sanitation process defined

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Review monitoring actions (CCPs)

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Identify problems

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Take action

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Validate corrective action
Short/long term

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Review

- What is ISO 9001:2000
- What is HACCP
- Sanitation on bottling lines defined/measured
- How all three are linked together

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Guidelines to Success

- A Quality Management System:

  ISO 9001:2000

- HACCP (Hazard Analysis Critical Control Point) Program:

  ISO 22000:2005

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