Understanding Verification & Validation
November 2018

Verification and Validation

True or False?

Production of safe, high quality food happens by luck and chance.

False

Production of safe, high quality food takes skill, knowledge, thoughtful planning, and reliable execution.

True
Verification and Validation

Validation
What evidence do we have that our existing plan/policies/procedures will result in safe, high quality food?

How do we know we have the correct:
- Cleaning procedures
- Oven temperatures
- Preventive maintenance schedule

Verification and Validation

Verification
Are doing what we said we would do? Are we following our plan/policies/procedures?
- GMPs
- Maintenance
- Sanitation
- Process controls
- QA checks
- HACCP / preventive controls
Verification and Validation

Validation – Evidence of Effectiveness

What does the science tell us?
• Temperature impact on microorganisms
• Stock rotation frequency based on insect lifecycles
• Which cleaning agents work best on specific soil types
• Which orientation to use with our metal detector test pieces

Verification and Validation

Verification – Did We Follow Our Plan?

• Are employees complying with GMPs?
• Were sanitation procedures followed?
• Did we conduct maintenance at the defined frequency?
• Did we check our metal detector with the defined test pieces?
Verification and Validation

Self-Inspections

- Line is about to start and it’s not clean
- Doors to the exterior are propped open

Internal Audits

- Maintenance schedule does not include packaging machines

Feet

Seat
Verification and Validation

Self-Inspections

- Refrigerated goods stored on ambient dock for extended time
- Wrong color scoop used for allergens

Internal Audits

- Records show that an untrained person was cleaning the line

Verification and Validation

Handwashing

Verification
Observation

Validation
Swab
Verification and Validation

Kill Step (Cooking)

Verification
Temperature Checks

Validation
Scientific Literature

Verification and Validation

Refrigeration

Verification
Temperature Checks at Warmest Location

Validation
Scientific Literature
Verification and Validation

Sanitizer Concentration

Verification

Validation

PPM Tests

Scientific Literature

Verification and Validation

Placement of Rodent Traps

Verification

Validation

Correct Placement

Rodent Biology Research
Verification and Validation

Stock Rotation of Insect-Susceptible Materials

Verification

Validation

Checking Age of Materials

Insect Biology Research

Verification and Validation

Ozonation of Bottled Water

Verification

Validation

Ozone Test

Ozone Science
Verification and Validation

Due Diligence
Reasonable Steps Taken to Ensure Safe Food

Records of verification and validation = due diligence

Verification and Validation

Include Verification and Validation Concepts in Training

Validation – *WHY it’s important to do it this way!*

Verification – *When you create a record, you are providing evidence that we followed our procedures – or took action when things went astray.*
Verification and Validation

Watch Outs

Don’t confuse regulation with scientific validation

Verification of a bad plan will end badly

“We’ve always done it this way” is not validation

Verification and Validation

Watch out - Absence of complaints is not enough

Analogy:

*On average, a drunk driver will drive under the influence 80 times before his first arrest or accident.*

*Does this mean that someone who has driven under the influence 79 times should conclude that drunk driving is safe?*
Verification and Validation

Verification
Proof that you are following your plan

Validation
Proof that you have created a well-thought out, science-based plan

Questions