



THE SAUSAGE AND MEAT PRODUCTS GUIDE

Cold raw lots. Checked process. Traceable packs.

From raw meat intake to labelled pack, complaint and recall

A capability and evaluation guide for sausage makers, cooked and cured meat processors, further processors and co-packers who want raw lots, cold storage, recipes, cook and chill checks, sanitation and labels in one connected record.



HACCP AND SANITATION

COOK, CHILL, LISTERIA

RAW LOT TO PACK

Global edition / October 2026

v5ultimate.com

Scope: practical orientation, not legal advice. Photos are staged; lots, recipes and numbers are worked examples.

INSIDE THE GUIDE

Combo bin to pack, check by check.

Meat products are made from perishable raw lots, kept cold, seasoned, ground, stuffed, often cooked and chilled, then packed and labelled. This guide follows one batch of cooked frankfurters and shows what each step must leave behind.

01 / FRAME

pp. 03–05

Rules, the plan, one day

U.S. USDA FSIS rules, EU hygiene package, Canada, Codex; the HACCP plan and Sanitation SOPs; one batch day.

02 / MATERIALS

pp. 06–08

Specification to cold store

Meat, casings, cure and seasoning specs and suppliers, intake temperatures, cold storage, status and use-by.

03 / MAKE

pp. 09–14

Recipe, grind, cook, chill

Meat block and recipe, weighing cure and seasoning, grinding and stuffing with rework, the cook and chill, corrective actions, pre-shipment review.

04 / PROTECT

pp. 15–18

Listeria, hygiene, packs

Post-lethality exposure and Listeria control, sanitation and changeover, packing and labels, testing and holds.

05 / SUSTAIN

pp. 19–26

Improve, maintain, trace

Complaints and CAPA, people, thermometers and equipment, OEE, trace and recall, a mock recall, portals, records and AI.

06 / APPLY

pp. 27–36

Evidence map, tools, sources

Evidence map against 9 CFR 416/417/430, four worksheets, roadmap, four-week evaluation and 17 linked sources.

Who it is for. Plant and production managers, HACCP coordinators and quality teams, sanitation leads, warehouse and purchasing, technical teams at co-packers and retail suppliers, and anyone choosing a production and quality system for fresh, cooked, smoked or cured meat products.

How to read it. Every operational page ends with a teal Where V5 fits panel. Everything above it is practice and regulation, useful whether or not you ever use V5. Regulatory statements cite numbered sources; check the current text for your products and markets.

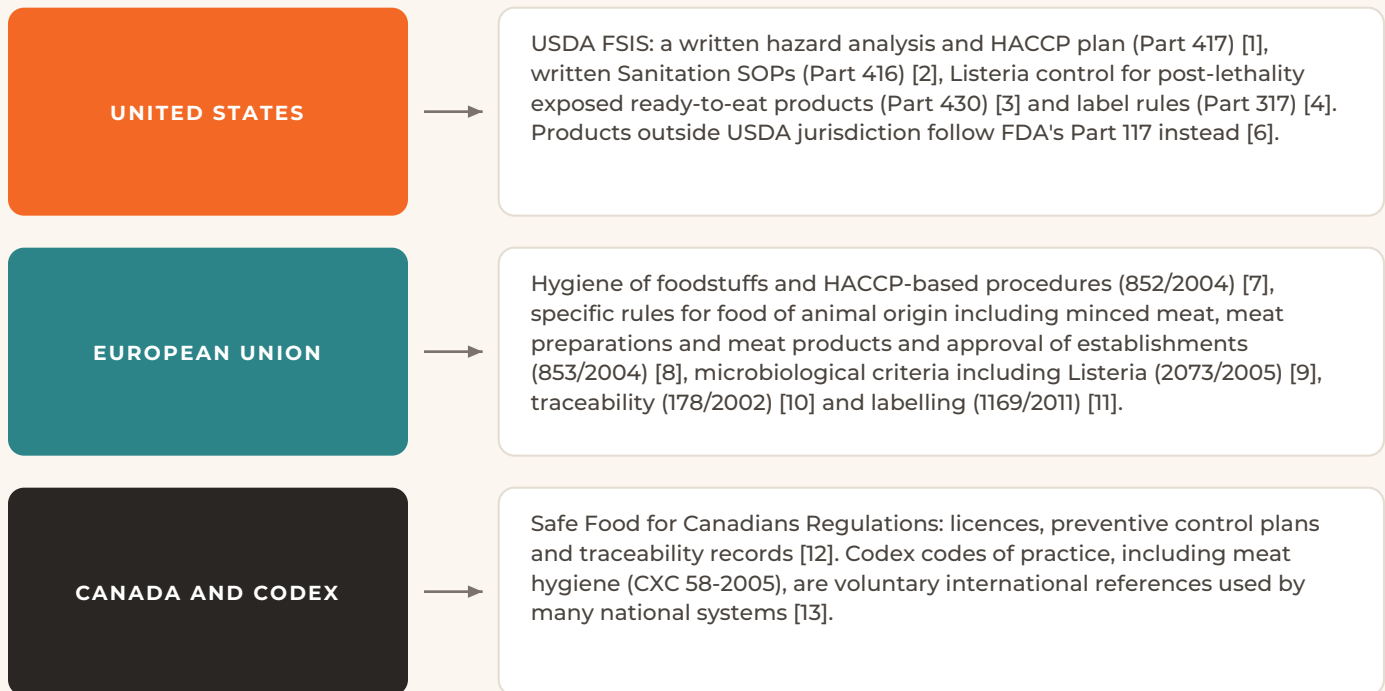
WHERE V5 FITS

V5 records the receiving, storage, weighing, process, sanitation, testing and packing work your HACCP plan and procedures define. It does not write or validate your hazard analysis, set critical limits, decide product disposition, release product or decide recalls. Those stay with your trained people.

FRAME / 01

Different regulators, one hazard logic.

Meat is regulated more tightly than most food. In the U.S., most meat products are made under USDA inspection; the EU has specific rules for food of animal origin; Canada licenses and requires preventive control plans. All rest on hazard analysis.



Who inspects you?

Whether a product falls under USDA or FDA depends on its species and meat content. Confirm it for each product before designing records [5][6].

Raw or ready-to-eat?

Fresh sausage is raw and cooked by the consumer; a frankfurter is ready-to-eat. The hazards, critical limits and Listeria duties differ [3].

Write the scope down

Products, sites, markets, process categories and which rules apply, kept as a controlled document with an owner.

WHERE V5 FITS

Keep scope, HACCP plans, Sanitation SOPs and specifications as controlled documents with revisions, owners and review dates. V5 industry packs adjust wording, screens and reports for meat work; they do not classify products or decide which rules apply.

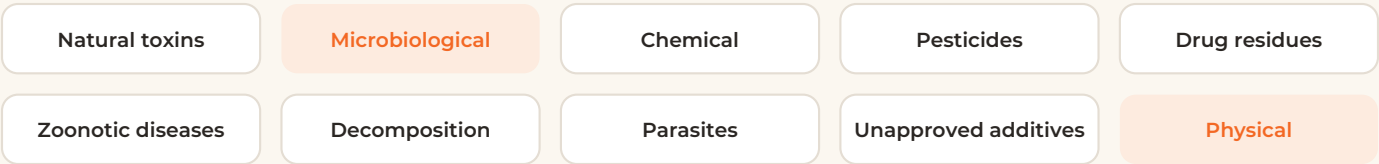
Sources: [1], [2], [3], [4], [5], [6], [7], [8], [9], [10], [11], [12], [13] (linked on pages 34–36)

FRAME / 02

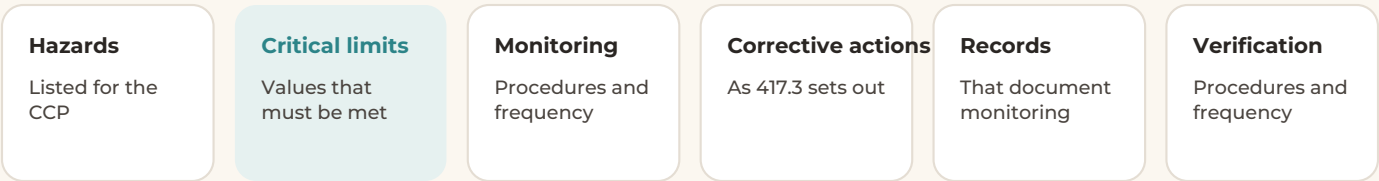
The plan behind every record.

In the U.S., every official establishment conducts a hazard analysis, draws a flow chart and, where hazards are reasonably likely to occur, writes a HACCP plan for each product [1]. The records your team makes every shift prove that plan is working.

HAZARD SOURCES THE U.S. RULE LISTS FOR THE HAZARD ANALYSIS (417.2(a)(3)) [1]



WHAT A PLAN CONTAINS (417.2(c)), FOR EACH CRITICAL CONTROL POINT [1]



Sanitation SOPs too

Written procedures for cleaning before and during operations, with frequency and responsible people, signed and dated by the person with overall authority on-site, including on change [2].

Validate, verify, reassess

Validate the plan initially; verify continuously through calibration, observation and record review; reassess at least annually and on change [1].

Trained people

The plan is developed and reassessed by an individual trained in HACCP principles as the rule describes [1].

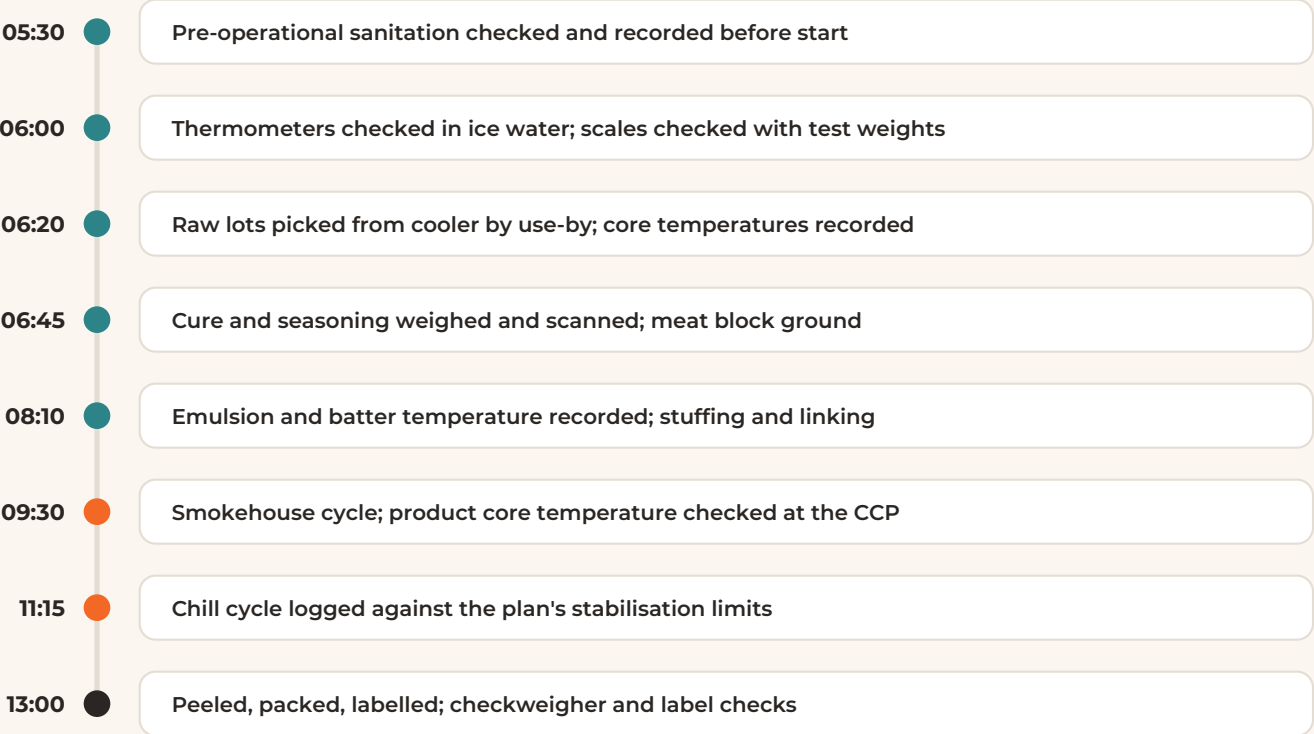
WHERE V5 FITS

HACCP plans, flow charts and Sanitation SOPs can be held as controlled documents; each CCP's limits and monitoring frequency become kiosk checks on the work order. V5 does not perform the hazard analysis, choose CCPs or set critical limits.

FRAME / 03

One batch day.

A worked example: batch FR-2214, cooked pork and beef frankfurters, recipe revision 7, 1,200 kg, made after a fresh pork sausage run on the same grinder. Times and values are an example only.



One record grows

Sanitation, raw lots, weights, temperatures and CCP checks add to one batch record, so the pre-shipment review starts complete.

Orange is critical

In this example the cook and chill are CCPs. Their values are the ones an inspector and your reviewer read first.

Recorded at the time

U.S. HACCP entries are made when the event occurs, with date, time and the initials of the person [].

WHERE V5 FITS

Work orders sit on the schedule with recipe revision, line and equipment. Kiosk steps capture who did what, with which lots, equipment and values, and the batch record assembles as the batch runs.

MATERIALS / 01

Specify meat, casings and cure.

A sausage is its raw materials. Lean and fat content, species, temperature at receipt, casing type and the cure all decide safety, labelling and yield.

Raw meat

Species, cut, lean/fat, temperature, condition, origin where labelled

Casings

Natural or manufactured, calibre, storage, supplier evidence

Cure

Nitrite or nitrate premix, concentration, supplier certificate

Seasonings

Composition, allergens, micro limits

Packaging

Film, trays, approved artwork revision

Approve suppliers

Hazards from incoming materials are part of the hazard analysis: the U.S. rule includes hazards that occur before entry into the establishment [1]. Approve sources and keep the evidence you rely on.

Cure is regulated

Permitted curing agents and their limits are set by each jurisdiction's additive rules. Keep the rule you follow with the cure specification and check the current text.

Seasoning allergens

Blends can carry milk, mustard, celery, soy or wheat. EU labelling emphasises 14 allergen groups [11]; your allergen list follows each market.

WHERE V5 FITS

Approved supplier lists, qualification, scorecards and specifications for meat, casings, cure, seasonings and packaging sit with purchasing and receiving, so an unapproved source is visible at goods-in. Suppliers can upload certificates through the supplier portal where configured.

Sources: [1], [11] (linked on pages 34–36)

MATERIALS / 02

Intake starts every trace.

Combo bins, boxed primals, frozen blocks and cartons of casings arrive with supplier lots. What is recorded at the dock starts every trace, every hold and every complaint investigation.



Temperature first

Record the actual product temperature, not a tick. Your plan sets the receiving limit and what happens when it fails.

Condition and labels

Packaging intact, labels and establishment marks match the order, no signs of thawing or contamination.

One supplier lot

Each supplier lot gets its own internal lot, even when two arrive on one pallet.

WORKED EXAMPLE: ONE RECEIPT

Item	Pork trim 80/20, 3 combo bins, 1,860 kg
Supplier / supplier lot	Approved supplier S-014 / PT-30918
Internal lot	RM-5512, linked to PT-30918
Product temperature	Recorded 2.1 °C against your plan's limit
Status	Released to cooler C-2, use-by from supplier

WHERE V5 FITS

Receiving records supplier, supplier lot, internal lot, quantity, use-by date, temperature and condition against the purchase order. A temperature outside your limit can hold the lot. Certificate values can be read from a PDF or photo for a person to confirm; AI never accepts a lot.

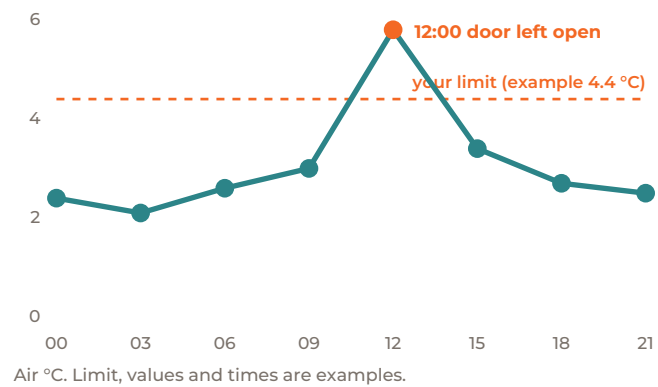
MATERIALS / 03

Cold, visible, used in date order.

Raw meat waits in coolers and freezers. Location, temperature, status and use-by need to be visible to the person picking for the next batch.



COOLER C-2 • ONE DAY OF RECORDED CHECKS (WORKED EXAMPLE)



Released

Can be picked, oldest use-by first

Hold

Temperature excursion under review

Expired / rejected

Cannot be used

Excursions need a decision

Record the reading, the cause and what was decided about the meat in that cooler, by whom.

Frozen and thawed

Record freeze and thaw dates where your specs set limits; thawed lots often get a new, shorter life.

Separate raw and cooked

Raw and ready-to-eat product kept apart in storage, with routes your procedures define.

WHERE V5 FITS

Lots carry status, location, use-by, freeze and thaw dates, with FEFO picking. Scanning a held or expired lot at the kiosk stops the step according to your workspace rules. Cooler checks run as timed tasks; supported connected sensors can send readings where configured.

MAKE / 01

The recipe is the meat block.

A frankfurter recipe starts with a meat block: lean and fat sources balanced to a target fat content, then water or ice, salt, cure and seasoning. Change the trim and the balance changes.

INGREDIENT	KG PER BATCH	FAT
Pork trim 80/20	540	20 %
Beef trim 90/10	300	10 %
Pork fat trim 50/50	160	50 %
Ice / water	150	—
Salt, cure premix	24	—
Seasoning blend FR-S3	26	—

WORKED FAT BALANCE (MEAT BLOCK ONLY)

$(540 \times 0.20 + 300 \times 0.10 + 160 \times 0.50) \div 1,000 = (108 + 30 + 80) \div 1,000 = 21.8 \%$ fat in the meat block, before water and dry ingredients.

Recipe FR rev 7: worked example, not a product formula.

Standards of identity

Many jurisdictions set compositional standards for named products such as frankfurters. Check the rule for each name you sell.

Labels follow the recipe

Ingredients, allergens and nutrition start from the approved revision. Change it only through change control.

Trim varies

When incoming lean differs from spec, adjust by an approved rule, not by memory, and record the adjustment.

WHERE V5 FITS

Recipes sit under revision with approval, quantities scaled to batch size and ingredient data. Only the approved revision is issued to a work order. Label and ingredient previews build from the recipe; a person approves every label.

Sources: [11] (linked on pages 34–36)

MAKE / 02

Weigh the cure, scan every lot.

A cure premix is a small quantity with a large consequence. Too little and the safety margin falls; too much and you exceed the rule. Seasoning errors become allergen and label errors.



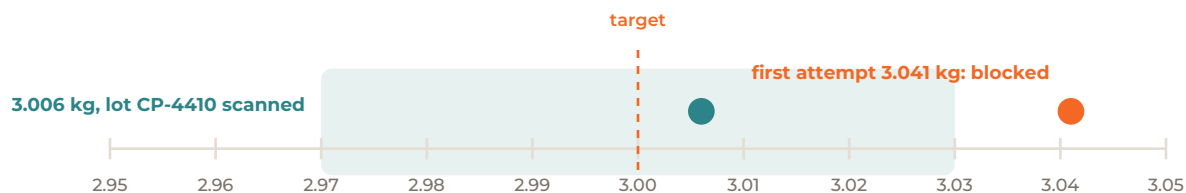
Right scale, checked

Weigh cure on a scale whose resolution suits the quantity, checked with test weights at the start of the shift.

One bag, one batch

Pre-weighed cure and seasoning bags labelled with batch, material, lot and weight, kept apart from other batches.

CURE PREMIX FOR FR-2214 · TARGET 3.00 kg, TOLERANCE ± 0.03 kg (WORKED EXAMPLE)



kilograms on scale S-02 (1 g resolution)

WHERE V5 FITS

Weigh & dispense guides each addition by recipe quantity and tolerance, scans the lot and can block an out-of-tolerance or wrong-lot addition. Supported, configured scales send weights directly; otherwise the operator enters the value and their identity is recorded.

MAKE / 03

Grind, chop, stuff, and track rework.

Grinding and chopping generate heat; batter temperature affects emulsion stability and microbial growth. Rework saves meat but can mix lots, allergens and days.



PROCESS VALUES ON FR-2214 (WORKED EXAMPLE)

Meat temperature to grinder	Your limit	1.8 °C
Grinder plate	Spec 3 mm	3 mm
Batter end temperature	Your range	11.6 °C
Stuffing: casing lot	Scanned	CS-882
Link length / weight	Every 30 min	In range

Rework is a lot

Give rework its own lot and status, record what it came from and where it went, and set limits on age and quantity.

Like into like

Add rework only into the same or a compatible recipe, matching allergens and species declared on the label.

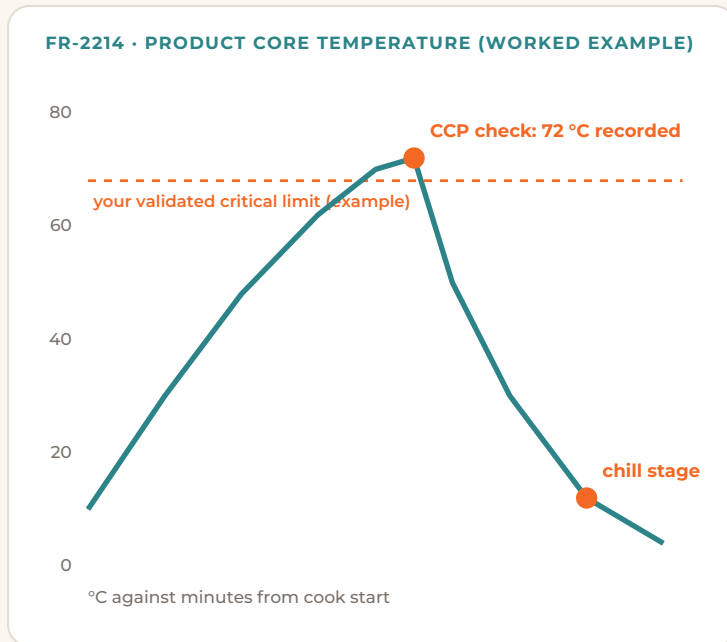
WHERE V5 FITS

Kiosk steps record temperatures, plate, casing lots and sample weights with limits; an out-of-limit value can stop the step and open a deviation. Rework is tracked as its own lot, so genealogy shows which batches it came from and went into.

MAKE / 04

The cook and chill are the record.

For ready-to-eat products, the lethality step and the chill that follows are usually critical control points. The limits come from your validated plan; the record must show actual values.



Limits are yours

Limits come from your validation. FSIS Revised Appendix A and B (2021) and the 2023 dried-products guideline are guidance with examples, not universal limits [14][15][17].

Chill matters as much

Spore-forming bacteria can grow if cooling is slow. Record the chill stages your plan sets, with times.

Probe the coldest point

Thickest product, coldest smokehouse position, calibrated thermometer, actual value recorded [1].

WHERE V5 FITS

Kiosk steps record core temperature, time and probe used at each CCP check against the plan's limits; a failed check can hold the batch and open the corrective action. Supported, configured probes and oven controllers can send readings; otherwise operators enter values.

Sources: [1], [14], [15], [16], [17] (linked on pages 34–36)

MAKE / 05

When a critical limit is missed.

A CCP deviation is not just a failed check. The U.S. rule sets four things the corrective action must ensure, and a fuller path when a deviation is not covered by the plan [1].

01

Cause found

The cause of the deviation is identified and eliminated

02

Control back

The CCP is under control after the action

03

Recurrence

Measures to prevent it happening again

04

No unsafe product

Nothing injurious or adulterated enters commerce

417.3(a) [1]

WORKED EXAMPLE: A COOK DEVIATION

Found	09:52, rack 4 probe 66 °C against the limit
Immediate	Truck held in smokehouse; cycle extended
Re-check	10:20, 71 °C recorded on two sticks
Cause	Rack loaded in coldest corner; loading SOP unclear
Prevent	Loading pattern changed; SOP revised; staff trained
Product	Disposition decided and signed by trained person

Not covered by the plan? Segregate and hold the product, review its acceptability, act so nothing adulterated enters commerce, and have a trained individual reassess whether the plan needs to change (417.3(b)) [1]. Record all of it.

WHERE V5 FITS

A failed CCP check can open a deviation linked to the batch, equipment, people and readings, and hold affected product. The plan's corrective actions appear as tasks with owners. AI can draft a summary for a person to edit. A trained person decides disposition.

Sources: [1] (linked on pages 34–36)

MAKE / 06

Review before product ships.

Before shipping, the U.S. rule requires a review of the records for that production to confirm completeness, that critical limits were met and, where needed, that corrective actions and disposition were done [1].



Monitoring

All CCP checks present, with actual values



Limits

Every critical limit met, or deviation handled



Corrections

Corrective actions and disposition recorded



Calibration

Instruments checked as the plan says



Sign-off

Dated and signed, ideally by someone else

PRE-SHIPMENT REVIEW · FR-2214

Reviewed by QA technician (did not produce the records); date, time recorded

Cook deviation DV-031 handled per plan; disposition signed before review.

Someone who did not make it

Where practicable the review is done, dated and signed by an individual who did not produce the records, preferably HACCP-trained, or the responsible official [1].

Entries made at the time

Each entry includes date and time and is signed or initialled by the person making it (417.5(b)) [1].

Review by exception

Start from what is missing or out of limit, then sample the rest. A tick list of 40 lines hides the one that matters.

WHERE V5 FITS

A review screen can show the batch's CCP checks, deviations and calibration status with exceptions first; only roles you authorise can record the review. Electronic signatures are available where your plan includes them. V5 never ships or releases product on its own.

Sources: [1] (linked on pages 34–36)

PROTECT / 01

After the cook, protect it.

Cooked product that is sliced, peeled or packed after the lethality step is exposed again. The U.S. Listeria rule calls this post-lethality exposed ready-to-eat product [3].



Alternative 1

A post-lethality treatment and an antimicrobial agent or process that limits growth [3]

Alternative 2

Either one; if only a growth-limiting agent or process, the same surface-testing duties as Alternative 3 apply [3]

Alternative 3

Sanitation measures only; food-contact surface testing and hold-and-test conditions, plus extra duties for deli and hotdog products [3]

Summarised from 430.4(b). Each alternative carries its own conditions in the rule; read the full text.

Contaminated means adulterated

In the U.S., RTE product containing *L. monocytogenes*, or that touched a contaminated food-contact surface, is adulterated and cannot be released without a process that destroys it [3].

EU criteria

The EU sets Listeria criteria for ready-to-eat foods and includes environmental sampling expectations for some RTE producers; check the current text for scope [9].

Zones and trends

Map food-contact and non-contact zones, sample on a plan, and look for repeat positives at one site, not just pass or fail.

WHERE V5 FITS

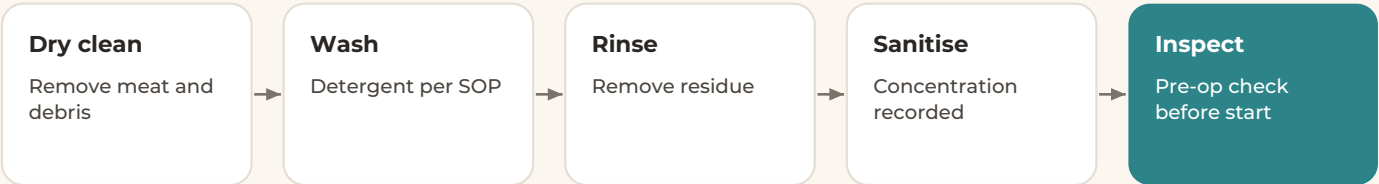
Environmental sampling plans, swab sites and results can be recorded in Lab & QC with zones and limits; a positive can open a deviation and hold the linked product lots. V5 does not choose your alternative, sampling frequency or limits.

Sources: [3], [9] (linked on pages 34–36)

PROTECT / 02

Clean between runs, and prove it.

Sanitation is a written, signed procedure in the U.S. [2] and a prerequisite everywhere. Changeovers between species, allergens, and raw and cooked product need their own checks.



CHANGEOVER MATRIX FOR GRINDER G-1 (WORKED EXAMPLE)

From \ to	Pork sausage	Pork + beef frank	Chicken + milk
Pork sausage	—	Dry clean	Full wash + check
Pork + beef frank	Full wash	—	Full wash + check
Chicken + milk	Full wash + check	Full wash + check	—

Signed and dated

Sanitation SOPs are signed and dated by the person with overall authority on-site when implemented and on any change [2].

Pre-op is identified

Procedures done before operations are identified as such and address at least food-contact surfaces [2].

Allergen verification

After an allergen changeover, verify by inspection and, where your plan says, a test. Record the result.

WHERE V5 FITS

Sanitation and pre-operational checks run as checklists with photos, signatures and times; a failed check can block the line's next work order. Changeover rules can be held with the schedule so the right clean is called. V5 does not validate cleaning.

PROTECT / 03

Every pack carries its lot and date.

The lot code and date on a pack link a consumer complaint to your record. Label content, allergen declarations and pack integrity need checks of their own.

U.S. label features

Including product name, ingredients statement, producer name and place of business, net quantity, the inspection legend with establishment number and, where needed, handling statements [4].

EU label content

Mandatory particulars under 1169/2011 include ingredients with allergens emphasised, use-by date for highly perishable foods and storage conditions [11].

Artwork is controlled

Films and labels are printed to an approved revision; old stock is reconciled out on change.



PACK AND LABEL CHECKS ON FR-2214 (WORKED EXAMPLE)

Start	Label revision 4 matches work order	OK
Start	Lot FR-2214 and use-by legible	OK
Every 30 min	Seal integrity on 5 packs	OK
13:40	Checkweigher reject rate rising	HOLD
End	Labels issued vs used vs returned	OK

WHERE V5 FITS

Label printing can use data from the batch record so codes and dates come from the record, not a keyboard. Label, seal and weight checks run as timed kiosk tasks; supported checkweighers can send results. A person approves the artwork and label content.

Sources: [4], [11] (linked on pages 34–36)

PROTECT / 04

Test, hold, then let it go.

Product testing, whether a customer specification, an EU criterion or a hold-and-test under your Listeria programme, only protects anyone if the product waits for the result.

TEST	PLAN	RESULT
Fat content	Customer spec	21.4 %
Salt	Customer spec	1.9 %
Listeria, product	Your programme	Not detected
Listeria, FCS swab	Zone 1 plan	Pending
Sensory	Each batch	Conforms

Example plan and results. Methods, frequencies and limits are yours.

A HOLD THAT ACTUALLY HOLDS

Pallets of FR-2214 sit in the finished cooler with status **Hold, awaiting swab result**. The picking screen will not offer them; the dispatch scan rejects them. When the result is reviewed, a named person changes the status, and the reason is recorded.

Results need people

An analyst records, a reviewer checks against the limit, and only then does status change.

Never retest to pass

A positive or out-of-spec result is investigated. The first result stays in the record.

Link swab to product

A food-contact positive should show which lots were made on that surface since the last clean result.

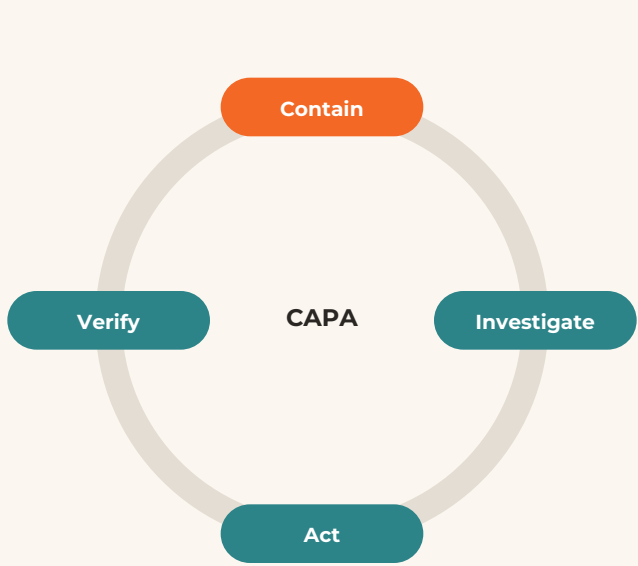
WHERE V5 FITS

Lab & QC and LIMS hold sample plans, specifications and results; pending results keep lots on hold and out-of-limit results can open a deviation. Analysts and reviewers sign. V5 does not approve results or release product.

SUSTAIN / 01

Complaints, causes and lasting fixes.

A bone fragment, a split casing, a pack that blew, an undeclared allergen. Each complaint links to a lot; some become recalls; most become lessons.



- Feed it from everywhere**
Complaints, CCP deviations, sanitation failures, positive swabs, audit findings, supplier issues and trends.
- Root cause, not blame**
Ask why until you reach a cause you can act on: a procedure, a design, a supplier, a training gap.
- Agree effectiveness first**
Decide what evidence shows the action worked, and review it on a date.

WORKED EXAMPLE: A CAPA FROM BONE FRAGMENT COMPLAINTS

Problem	Two complaints of hard fragments in pork sausage
Linked lots	Both from trim lot PT-30918, same supplier
Cause found	Supplier deboning change; our intake check visual only
Action	SCAR to supplier; intake inspection added; plan reassessed
Effectiveness	No fragment complaints over next 12 weeks
Status	Closed after review

WHERE V5 FITS

Complaints link to lots and batch records, and CAPA records link to their sources, with root-cause workflow, owners, due dates and effectiveness checks. SCARs go to suppliers when the cause is upstream. AI can draft a summary for a person to edit.

SUSTAIN / 02

Trained, clean and permitted.

Hygiene, gowning, and the right training for each CCP are part of the product. A smokehouse operator who has not been trained on the new loading pattern is a risk.

HACCP training

The U.S. rule names the trained individual for developing, reassessing and reviewing records [1]. Keep evidence of that training.

Hygiene and health

Clothing, hand washing, boots, and reporting of illness, per your procedures and the hygiene rules that apply to you [2][7].

Roles and permissions

Who may record a CCP, decide a disposition, change a recipe, release a lot. Write it down and enforce it.

EXAMPLE COMPETENCE AND PERMISSION MATRIX

	Cook CCP check	Label check	Pre-ship review	Disposition
Smokehouse operator	Trained	—	Not permitted	Not permitted
Packing operator	—	Trained	Not permitted	Not permitted
QA technician	Trained	Trained	Trained	Not permitted
HACCP coordinator	Trained	Trained	Trained	Trained

Cold hands, gloves, many languages. Meat plants are cold and wet. Instructions at the step should be short, in the operator's language, on a tablet that works with gloves and can be washed down.

WHERE V5 FITS

Document control keeps SOPs and the HACCP plan under revision with read-and-understood training. The skills matrix can block untrained operators at the kiosk where configured, and role permissions decide who can record, verify, review or decide disposition.

SUSTAIN / 03

Trust the thermometer.

Every CCP value is only as good as the instrument that measured it. The U.S. rule lists calibration of process-monitoring instruments as a verification activity and a HACCP record [1].



ICE-POINT CHECKS, ONE MORNING (WORKED EXAMPLE)

Probe T-04 (smokehouse)	0.1 °C	OK
Probe T-07 (packing)	0.3 °C	OK
Probe T-09 (receiving)	1.4 °C, outside your tolerance	HOLD

Fail means look back

A probe out of tolerance raises the question: what did it measure since its last good check?

Grinders and slicers

Plates, knives and metal detectors on planned maintenance, with release back to production after cleaning.

Smokehouse service

Fans, steam and controllers affect heat distribution. Keep service and temperature mapping with the oven.

WHERE V5 FITS

Each probe, scale, smokehouse and metal detector can have an equipment record with calibration schedule, results, certificates, planned maintenance and use history. Out-of-calibration equipment can be blocked at the kiosk. Predictive failure analytics are not offered today.

Sources: [1] (linked on pages 34–36)

SUSTAIN / 04

Where the line's day goes.

Meat lines lose time to changeovers between species and allergens, sanitation, waiting for smokehouse capacity and packaging stops. Yield loss is a second, quieter cost.

PACKING LINE 1 · ONE 8-HOUR SHIFT (WORKED EXAMPLE)



WORKED OEE ARITHMETIC

Availability

68%

5.44 h run of 8 h planned

Performance

88%

actual vs ideal packs per minute

Quality

98%

good packs, first time

OEE

58.6% $0.68 \times 0.88 \times 0.98$

WORKED COOK YIELD (EXAMPLE)

1,200 kg raw batter stuffed; 1,068 kg after cook, chill and peel. Yield = $1,068 \div 1,200 = 89.0\%$. A one-point drop across 20 batches a week is 240 kg of product a week.

Sequence by risk

Raw before cooked, no allergen before allergen, one species before mixed: fewer full cleans, safer and faster.

Smokehouse is the pacer

If packing waits for the oven, plan around the oven's cycles, not the packer's speed.

Give-away counts

Overweight packs are product given away. Track it with checkweigher data.

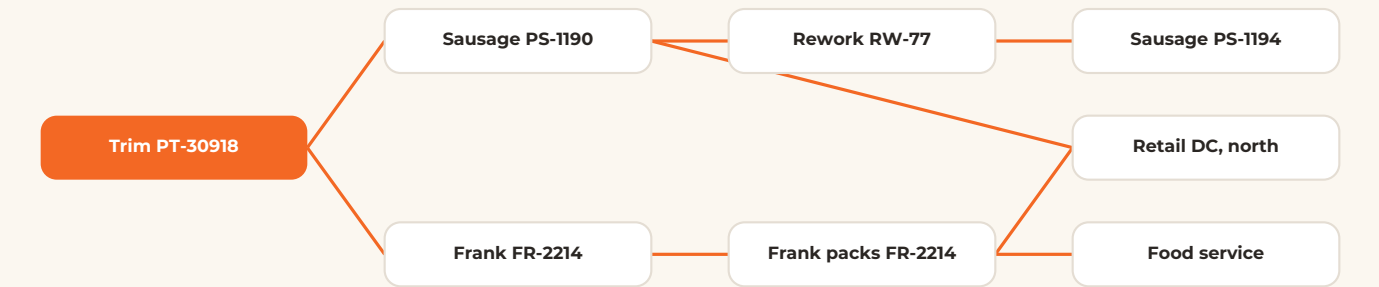
WHERE V5 FITS

Downtime reasons, changeovers, rejects, yield and OEE come from events your team and supported connected machines record, with reports and dashboards where your plan includes them. AI demand and yield forecasting and process anomaly detection are coming soon, not available today.

SUSTAIN / 05

Trace both ways, then act.

A trim supplier reports lot PT-30918 may be contaminated. Which batches used it, including rework, which packs, which customers, and what is still in your coolers?



Rework carries the lot

Here rework from PS-1190 went into a later batch, so PS-1194 is in scope too. Without rework links, a trace stops short.

EU one step each way

Food business operators identify who supplied them and to whom they supplied, and withdraw and inform when food is unsafe [10].

U.S. recall plan

USDA-inspected establishments work with FSIS on recalls; FDA-regulated foods with a hazard need a written recall plan under Part 117 [5][6].

WHERE V5 FITS

Lots link at receipt, weighing, rework, cooking, packing and shipment, so genealogy can be followed forward from a raw lot or back from a complaint, with customers and quantities listed. Recall and notification decisions stay with your team.

SUSTAIN / 06

Time a mock recall, kilo by kilo.

Pick a raw lot nobody expects, start the clock, and see how long it takes to account for every kilogram of it and every pack it went into.

- 0:00

Start: PT-30918 named; QA lead opens the trace
- 0:04

Batches found: PS-1190, FR-2214; rework RW-77
- 0:09

Rework leads to PS-1194
- 0:16

Packs per batch; customers and shipped quantities listed
- 0:24

Stock in coolers found and placed on hold
- 0:35

Balance: received vs used vs stock vs waste

BALANCE FOR PT-30918 (WORKED EXAMPLE)

Received	1,860 kg in 3 combo bins
Used in PS-1190	720 kg
Used in FR-2214	540 kg
In cooler (held)	588 kg
Recorded trim waste	12 kg
Unaccounted	0 kg

Times are an example of what to measure, not a benchmark. Include your customers: a trace that stops at your dock does not take a pack off a shelf.

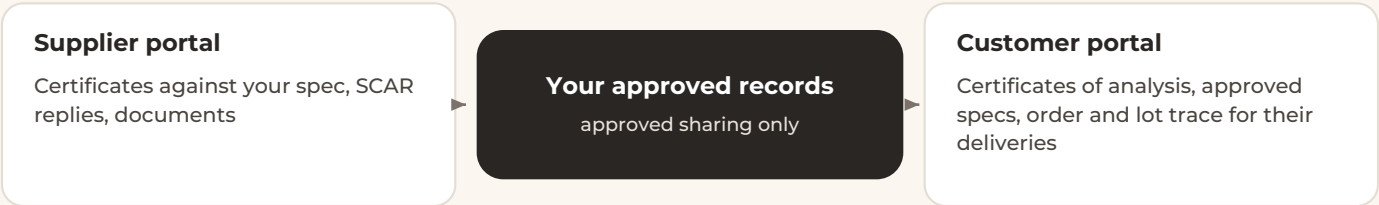
WHERE V5 FITS

Trace reports list batches, rework, packs, customers and quantities from a raw or finished lot, and stock can be held from the trace. Mock recalls can be logged as exercises with times and findings that feed CAPA.

SUSTAIN / 07

Retailers, suppliers, shared well.

Retail and food-service customers ask for certificates, specifications and lot information; suppliers send certificates and respond to SCARs. Each sees only what you approve.



Customer specs

Retail specs often add fat, salt, foreign-body and micro limits beyond the law. Hold them with the product, by customer.

Co-packing

Agree who owns the recipe, labels, HACCP plan, release and recall contact before the first run.

Review before it counts

A supplier upload is a claim until a person reviews it against the specification.

A SHARING POLICY TO AGREE BEFORE ANYONE LOGS IN

Certificate of analysis	After review	Customer
Lot trace for their deliveries	On request, agreed scope	Customer QA
Complaint outcomes	Agreed timing	Customer QA
Recipe details	Not by portal	Your technical team
Supplier certificates and SCARs	Reviewed before they count	Your QA

WHERE V5 FITS

A portal foundation gives customers and suppliers branded, read-only access to what you approve. Portal scope and permissions depend on configuration; check the current plan comparison for inclusion. Nothing is shared automatically from an open record.

SUSTAIN / 08

Trustworthy records. Honest AI.

Electronic records help only if they are made at the time, by a known person, with actual values, and if AI stays a helper under human control.

Computer records allowed

The U.S. HACCP rule accepts computer records where controls ensure the integrity of electronic data and signatures [1].

Keep them long enough

CCP monitoring records: at least one year for refrigerated product, two years for frozen, preserved or shelf-stable product; off-site after six months if retrievable within 24 hours [1].

Keep the history

Changes to a recorded value should show who, when and why, with the original still visible.

AI CAN HELP

- Read supplier certificate values for a person to confirm
- Draft a recipe or SOP from an uploaded sheet for approval
- Suggest a deviation classification or draft a summary
- Explain a batch's history in plain language
- Find records and screens faster

AI NEVER

- Writes or validates your hazard analysis
- Sets critical limits or Listeria alternatives
- Decides product disposition after a deviation
- Releases product or decides a recall
- Predicts failures today (forecasting is coming soon)

WHERE V5 FITS

Every record keeps who, what and when in an audit trail every plan can view; tamper-evident trails, electronic signatures and a validation pack are available where your plan includes them. AI features need configured provider access and human review.

Sources: [1] (linked on pages 34–36)

APPLY / 01

Evidence map.

One page to check that every theme an inspector, auditor or retail customer may ask about has an owner and a record. Themes follow U.S. 9 CFR Parts 416, 417 and 430 [1][2][3]; map them to your own plan and market.

THEME	TYPICAL EVIDENCE	WHERE IT LIVES IN V5	OWNER
Hazard analysis, plan	Flow chart, CCPs, limits	Document control	HACCP lead
Sanitation SOPs	Signed SOPs, pre-op records	Checklists, docs	Sanitation
Incoming materials	Specs, supplier approval	Suppliers, receiving	QA
Receiving, storage	Temperatures, status, dates	Receiving, warehouse	Warehouse
Recipes	Approved revision	Recipes, change control	Technical
CCP monitoring	Actual values, time, initials	Kiosk checks	Production
Corrective actions	417.3 elements, disposition	Deviations, CAPA	QA
Verification	Calibration, observation	Equipment, audits	QA
Pre-shipment review	Dated, signed review	Release review	QA
Listeria control	Alternative, swabs, holds	Lab & QC, LIMS	QA
Labels	Approved artwork, checks	Labels, kiosk checks	QA + packing
Trace and recall	Genealogy, mock recalls	Trace reports	QA
Training	HACCP and task training	Skills matrix, docs	HR + QA
Reassessment	Annual and on change	Document control	HACCP lead

Plan inclusion varies; some areas need Professional or Enterprise. Confirm against the current plan comparison before you scope a project.

WORKSHEET 01

Would yesterday's review pass?

Pick one recent batch of a ready-to-eat product. Mark Yes, Partly or No, then note the gap and its owner.

	YES	PARTLY	NO
Pre-op sanitation Recorded before start, with any failures and corrections.	☐	☐	☐
Raw lots Each raw lot used is recorded with quantity, temperature and status at use.	☐	☐	☐
Cure and seasoning Each addition within tolerance on a checked scale, lot scanned.	☐	☐	☐
Rework Any rework used is identified by lot, with its source batches.	☐	☐	☐
CCP values Actual cook and chill values recorded, with time and initials.	☐	☐	☐
Instruments Probes used were checked as the plan says, and identified.	☐	☐	☐
Deviations Any missed limit has corrective actions and a disposition.	☐	☐	☐
Pack and label Label revision, codes, seals and weights checked as planned.	☐	☐	☐
Holds Product held for results is still held, or released by a named person.	☐	☐	☐
Review Pre-shipment review dated and signed, ideally by someone else.	☐	☐	☐

NOTES AND OWNERS

WORKSHEET 02

Ready for a missed cook limit?

Walk through a real or invented cook deviation on one truck of product. Mark Yes, Partly or No.

	YES	PARTLY	NO
Detect The operator knows the limit and what reading counts as a miss.	☐	☐	☐
Hold Affected product can be identified and held in minutes.	☐	☐	☐
Plan action The plan's corrective action for this CCP is written and known.	☐	☐	☐
Cause Someone is named to find and remove the cause.	☐	☐	☐
Control Re-checks show the CCP back under control, recorded.	☐	☐	☐
Prevent Measures to prevent recurrence are agreed and tracked.	☐	☐	☐
Disposition A trained person decides and records what happens to the product.	☐	☐	☐
Not in plan If the deviation is not covered, a reassessment is triggered.	☐	☐	☐
Other lots Other trucks or batches in the same cycle are checked.	☐	☐	☐
Review The pre-shipment review sees the deviation and its outcome.	☐	☐	☐

NOTES AND OWNERS

WORKSHEET 03

Ask to see it work.

Questions for any software demonstration. Ask the vendor to show each one with your recipe and line, not a slide.

	SHOWN	PARTLY	NOT SHOWN
Old revision Try to issue a superseded recipe revision to a work order.	☐	☐	☐
Held lot Scan a raw lot on temperature hold at weighing; show the step stop.	☐	☐	☐
Cure tolerance Enter an out-of-tolerance cure weight; show the block.	☐	☐	☐
Missed CCP Record a core temperature below the limit; show hold and corrective action.	☐	☐	☐
Rework Add rework to a batch; trace a raw lot through it to packs.	☐	☐	☐
Pending swab Try to ship product held for a swab result.	☐	☐	☐
Probe out Fail a probe calibration; list what it measured since its last good check.	☐	☐	☐
Review Show the pre-shipment review with exceptions first.	☐	☐	☐
Trace From a raw lot, list batches, packs, customers and quantities.	☐	☐	☐
Audit trail Show who changed a recorded value, when and why.	☐	☐	☐

NOTES AND OWNERS

APPLY / 02

Roll out in phases.

Start where value is visible and risk is contained. Run paper and system in parallel until each phase is verified.

PHASE 1 Foundations

Scope, roles, HACCP plan and Sanitation SOPs under document control, training records, equipment register with probe calibration.

PHASE 2 Materials

Specs and approved suppliers, receiving with temperatures, cooler locations, status and use-by, FEFO picking.

PHASE 3 Make

Recipes under revision, weighing of cure and seasoning, grinding and stuffing steps, rework lots; paper kept in parallel.

PHASE 4 Control

Cook and chill CCP checks, corrective actions, environmental sampling and holds, pack and label checks, pre-shipment review.

PHASE 5 Connect

Shipments and genealogy, mock recalls, complaints and CAPA, portals, OEE and yield review.

Tell your inspector and customers early. If CCP records move from paper to tablets, make sure the electronic records meet your integrity controls, keep paper until verified, and tell retail customers if certificates or lot codes will change.

WORKSHEET 04

Find your first improvement.

Score each area today: E evidenced, P partial, G gap. Start with the gap that costs you review time, held stock, complaints or inspection findings.

	E	P	G
Supplier approval Approved before use; evidence kept	☐	☐	☐
Receiving Actual temperatures; holds on failure	☐	☐	☐
Cold storage Checks, excursions decided, FEFO	☐	☐	☐
Recipes One approved revision; change control	☐	☐	☐
Cure and seasoning Right scale, tolerance, lot scanned	☐	☐	☐
Rework Own lot, sources and destinations	☐	☐	☐
Cook and chill Actual values, limits, corrective actions	☐	☐	☐
Listeria control Alternative, sampling, holds	☐	☐	☐
Sanitation Signed SOPs, pre-op, changeovers	☐	☐	☐
Pack and label Revision, codes, seals, weights	☐	☐	☐
Calibration Probes checked; look-back on failure	☐	☐	☐
Trace and recall Through rework, both ways, timed	☐	☐	☐

NOTES AND OWNERS

APPLY / 03

A fair evaluation in four weeks.

A practical way to test any system with your own people and one real product, without touching live records.

WEEK 1

Agree the product, the line and the five questions that matter most. Load one recipe with CCPs, limits and checks.

WEEK 2

Run a batch end to end with test data: receipt, cold storage, weighing, grinding, cook and chill, packing, review.

WEEK 3

Break it on purpose: old revision, held lot, cure out of tolerance, missed cook limit, failed probe, pending swab.

WEEK 4

Run a timed mock trace through rework and a mock complaint. Review with production, QA, sanitation, warehouse and IT.

Rules for the evaluation. Use test data only. Keep your current HACCP records and review process live until a verified change is approved. Record what was shown, not what was promised.

ASK V5

“We make [fresh sausage / cooked franks / smoked or cured products] on [number] lines for [retail / food service / co-pack] in [markets]. Our hardest moment is [e.g. proving every cook check before shipping]. Which workflows should we evaluate first?”

Start a 7-day free trial, no card required, or ask V5 on v5ultimate.com.

WHERE V5 FITS

Try V5 with your own recipe in a trial workspace using test data. The assistant can answer questions about features and plans; it does not give regulatory advice.

SOURCES

Keep the evidence close.

Primary sources behind this guide, checked October 2026. Click a title to open the publisher's page.

- | | | |
|-----|---|-------------------------|
| [1] | <u>U.S. eCFR, 9 CFR Part 417: Hazard Analysis and Critical Control Point (HACCP) Systems</u> | BINDING U.S. REGULATION |
| [2] | <u>U.S. eCFR, 9 CFR Part 416: Sanitation (including Sanitation SOPs)</u> | BINDING U.S. REGULATION |
| [3] | <u>U.S. eCFR, 9 CFR Part 430: Requirements for specific classes of product (RTE, Listeria)</u> | BINDING U.S. REGULATION |
| [4] | <u>U.S. eCFR, 9 CFR Part 317: Labeling, marking devices and containers</u> | BINDING U.S. REGULATION |
| [5] | <u>USDA FSIS, HACCP compliance guidance</u> | FSIS GUIDANCE |
| [6] | <u>U.S. eCFR, 21 CFR Part 117: FDA CGMP and preventive controls for human food</u> | BINDING U.S. REGULATION |
| [7] | <u>Regulation (EC) 852/2004: hygiene of foodstuffs (EU)</u> | BINDING EU REGULATION |
| [8] | <u>Regulation (EC) 853/2004: hygiene rules for food of animal origin (EU)</u> | BINDING EU REGULATION |

SOURCES

Sources, continued.

- | | | |
|------|---|-----------------------------|
| [9] | <u>Regulation (EC) 2073/2005: microbiological criteria for foodstuffs (EU)</u>
https://eur-lex.europa.eu/eli/reg/2005/2073/oj | BINDING EU REGULATION |
| [10] | <u>Regulation (EC) 178/2002: General Food Law (EU)</u>
https://eur-lex.europa.eu/eli/reg/2002/178/oj | BINDING EU REGULATION |
| [11] | <u>Regulation (EU) 1169/2011: food information to consumers</u>
https://eur-lex.europa.eu/eli/reg/2011/1169/oj | BINDING EU REGULATION |
| [12] | <u>Canada, Safe Food for Canadians Regulations (SOR/2018-108)</u>
https://laws-lois.justice.gc.ca/eng/regulations/SOR-2018-108/ | BINDING CANADIAN REGULATION |
| [13] | <u>Codex Alimentarius codes of practice (incl. meat hygiene, CXC 58-2005)</u>
https://www.fao.org/fao-who-codexalimentarius/codex-texts/codes-of-practice/en/ | VOLUNTARY INTERNATIONAL |
| [14] | <u>USDA FSIS, Cooking Guideline for Meat and Poultry Products (Revised Appendix A, 2021)</u>
https://www.fsis.usda.gov/guidelines/2021-0014 | FSIS GUIDANCE |
| [15] | <u>USDA FSIS, Stabilization Guideline for Meat and Poultry Products (Revised Appendix B, 2021)</u>
https://www.fsis.usda.gov/guidelines/2021-0013 | FSIS GUIDANCE |
| [16] | <u>USDA FSIS Notice 66-22: verifying use of Revised Appendix A and B</u>
https://www.fsis.usda.gov/policy/fsis-notice/66-22 | FSIS NOTICE TO INSPECTORS |

SOURCES

Sources, continued.

[17] USDA FSIS, RTE Fermented, Salt-Cured, and Dried Products Guideline (2023)

FSIS GUIDANCE

<https://www.fsis.usda.gov/guidelines/2023-0002>

How to read the status labels. Binding regulations are law in their jurisdiction. FSIS guidance explains how the agency views compliance and may change. Codex texts are voluntary international references.

SCOPE AND LIMITS

Practical orientation for evaluating meat products operations and software; not legal or regulatory advice, and not a list of every requirement. Requirements depend on product, species, process, jurisdiction and inspection status. Critical limits, lethality and stabilisation parameters, curing agent limits and Listeria sampling frequencies are deliberately not given; take them from your validated plan and the current rules. V5 capability statements reflect the V5 product reference reviewed on 1 October 2026 and depend on plan, configuration, devices and permissions. AI forecasting and anomaly detection are coming soon. V5 does not write hazard analyses, set limits, decide disposition, release product or decide recalls, and does not by itself make you compliant. Photography is illustrative; batches, results and charts are worked examples.



Cold raw lots. Checked process. Traceable packs.

See meat processing workflows at v5ultimate.com · Global edition · October 2026