



THE BEVERAGE & LIQUID MANUFACTURING GUIDE

One blend tank. Every bottle traced.

From concentrate drum to customer pallet, and back again in a recall

A practical evaluation guide for beverage and liquid food manufacturers: which rules apply to which product, how a blend specification and dosing record hold together, what to do when one tank fills two lines and one result is out, and what the person deciding release should be able to see.



21 CFR 120 / 117

113 / 114 WHERE APPLICABLE

EU 178/2002

PEOPLE DECIDE RELEASE

U.S. edition with EU scope notes / October 2026

v5ultimate.com

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

INSIDE THE GUIDE

One tank, two packaging runs.

Beverage plants turn a handful of ingredient lots into one large blend, then split it across lines and pack formats. This guide follows blend lot BL-1102 into a bottle run and a carton run, and shows what the record needs to hold at each step.

01 / FRAME

pp. 03–04

Which rules apply

Juice HACCP, Part 117, low-acid canned and acidified food rules, alcohol and EU food law, product by product.

02 / RECEIVE

pp. 05

Concentrates and ingredients

Supplier certificates, concentrate identity and what a lot needs before it can be dosed.

03 / MAKE

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Blend, test, fill, code

Blend revisions, dosing reconciliation, tank splits, Brix and pH records, changeovers and pack codes.

04 / HOLD

pp. 11–12

One result out, two runs held

A finished-lot result out of specification worked end to end, and the person who decides.

05 / RESPOND

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Evidence, trace, recall

Supplier to customer evidence, traceability rules, recall and the software you rely on.

06 / APPLY

pp. 17–22

V5 fit, worksheets, sources

Where V5 fits and does not, two worksheets, a four-week evaluation and twelve sources.

Who it is for. Plant, quality and food safety managers, blending and syrup room leads, laboratory leads, packaging and distribution managers, co-packers, and anyone choosing a production and quality system for a beverage or liquid food operation.

How to read it. Operational pages end with a teal Where V5 fits panel. Everything above it is regulation and practice; practice is labelled as such. Statements cite numbered sources; always check the current text.

WHERE V5 FITS

V5 records the receiving, blending, testing, filling, packing and quality work your procedures define. It does not set or validate kill steps, control fillers, pasteurizers or CCP equipment, judge product safety, release lots or decide recalls. Those decisions stay with your qualified people.

FRAME / 01

Which rules apply to you?

"Beverage" is not one legal category. A juice, a juice drink, a canned low-acid coffee, an acidified drink, a carbonated soft drink and a beer can each start from a different rulebook. Decide the route per product and process before designing the record.

PRODUCT ROUTE	STARTING POINT
Juice, incl. concentrates, sold as such or in beverages (U.S.)	Juice HACCP, 21 CFR 120 [1]
Other beverages and liquid foods (U.S.)	Part 117 CGMP and preventive controls, as applicable [2]
Low-acid (pH > 4.6, aw > 0.85), heat-processed, sealed	Also Part 113, by product and process [3]
Acidified (low-acid plus acid, pH 4.6 or below)	Also Part 114; carbonated beverages are excluded [4]
Alcoholic beverages (U.S.)	TTB regime; Part 117 limits for qualifying facilities [2][9]
Beverages made or sold in the EU	178/2002 and 852/2004, plus specific rules [10][11]

Definitions decide

Part 113 defines low-acid foods as foods other than alcoholic beverages with pH above 4.6 and water activity above 0.85 (113.3). Part 114's acidified food definition excludes carbonated beverages (114.3) [3][4].

Alcohol is different

Part 117 Subparts C and G do not apply to alcoholic beverages at facilities that need a TTB permit or registration and FDA registration (117.5(i)). Other rules still apply [2][9].

Not universal food law

This guide covers U.S. federal rules and EU regulations. State, national, customer and scheme requirements add to them; check each market you sell into.

PRACTICE: ONE ROUTE PER PRODUCT, WRITTEN DOWN

For each product, record its route, the rules your team concluded apply, the process basis (for example pH, water activity and heat treatment), who confirmed it and when. Review it when the formula, process, package or market changes.

WHERE V5 FITS

Product master data in V5 can carry the product's category, route and your regulatory notes, so records and reports follow the right template. V5 does not decide which rules apply to a product.

FRAME / 02

Juice: HACCP with a 5-log target.

Part 120 applies to any juice sold as such or used as an ingredient in beverages, including concentrates and purees (120.1). Its process control section sets a performance standard; how you meet it is your validated process, not your software [1].

Scope	Juice sold as such or used as an ingredient in beverages; raw agricultural ingredients are not covered (120.1) [1]	120.1
Standard	Control measures that consistently achieve at least a 5-log reduction in the pertinent microorganism (120.24(a)) [1]	120.24
Exemptions	Processors subject to Part 113 or 114, or using a single thermal step sufficient for shelf stability, are exempt from that paragraph [1]	120.24
Part 117	Subparts C and G do not apply to activities subject to Part 120 when you comply with it (117.5(c)) [2]	117.5
Juice drinks	Where juice is used as an ingredient in a drink, that juice must be processed under Part 120 (120.1) [1]	120.1
Labels	Juice percentage declarations use Brix-based single-strength values for juices from concentrate (101.30) [5]	101.30

Your process, your evidence. Whether a pasteurizer, another technology or a supplier's process achieves the 5-log reduction is a question for your HACCP team and process authority. The production record shows that each run was monitored and verified as your plan requires.

WHERE V5 FITS

V5 can hold your HACCP plan and procedures as controlled documents and record the monitoring and verification checks they call for against each blend and run. It does not set critical limits, validate a process or decide whether a 5-log reduction was achieved.

RECEIVE / 01

Every concentrate lot held until released.

Concentrates, purees, flavours, sweeteners and acids carry most of a beverage's identity and many of its hazards. What you record at receiving decides whether you can later say which lots went into which blend, and why each was accepted.



Certificate against your spec

Compare each supplier certificate with your specification: Brix, acidity, identity and any tests your hazard analysis requires. A missing value is a reason to hold.

Identity of the lot

Supplier, supplier lot, your lot, quantity, container, storage condition and date. Frozen or aseptic concentrates need their storage recorded too.

Supplier approval

Where Part 117 applies, a supply-chain program may be required for hazards a supplier controls [2].

LOT STATUS	MEANING	DOSE IT?
Pending	Received, certificate not yet reviewed	HOLD
Released	Certificate and checks reviewed	YES
Rejected	Out of specification or unapproved	DO NOT USE
Released with note	Deviation recorded and approved	YES

WORKED EXAMPLE: A CERTIFICATE THAT DOES NOT MATCH

Orange concentrate OC-879 arrives with a certificate Brix outside your specification. It stays on hold, the supplier is asked for an explanation and your lab re-tests a sample. QA decides; the record shows the certificate, the re-test and who decided.

WHERE V5 FITS

V5 receiving records ingredient lots with supplier identity, certificates and checks, holds each as pending and lets only released lots be dispensed. Supplier qualification and certificate extraction help; your team sets the specifications and who may release a lot.

MAKE / 01

Blend revisions and dosing that adds up.

A beverage blend is a formula applied to a tank: concentrates, water, sweeteners, acids and flavours in set ratios. The record should show which revision was used, what was actually added, from which lots, and whether it reconciles.

INGREDIENT (BLEND R4)	LOT	TARGET	ACTUAL	STATUS
Orange concentrate	OC-881	410 kg	410 kg	OK
Mango puree	MP-214	640 kg	612 kg	Short
Mango puree (substitute lot)	MP-215	—	28 kg	Approved
Sugar	SG-50	720 kg	720 kg	OK
Citric acid	CA-19	16.0 kg	16.0 kg	OK
Treated water to volume	WT-1102	to 8,000 L	8,000 L	OK

Revision on the record

The blend revision is printed on the batch record. A change to the formula goes through change control before the next tank uses it.

Substitutions are joins

When a lot runs out mid-dose, the second lot becomes part of the blend. Record it, approve it and keep it in the genealogy.

Reconcile before testing

Totals against target, and lot quantities against stock. An unreconciled tank is not ready for its blend test.

PRACTICE: WEIGH, DON'T TYPE

Capture additions from a connected scale or flow meter where you can, and scan the lot at the point of addition. Where a value is keyed in, require a second check for critical ingredients such as acids and allergens.

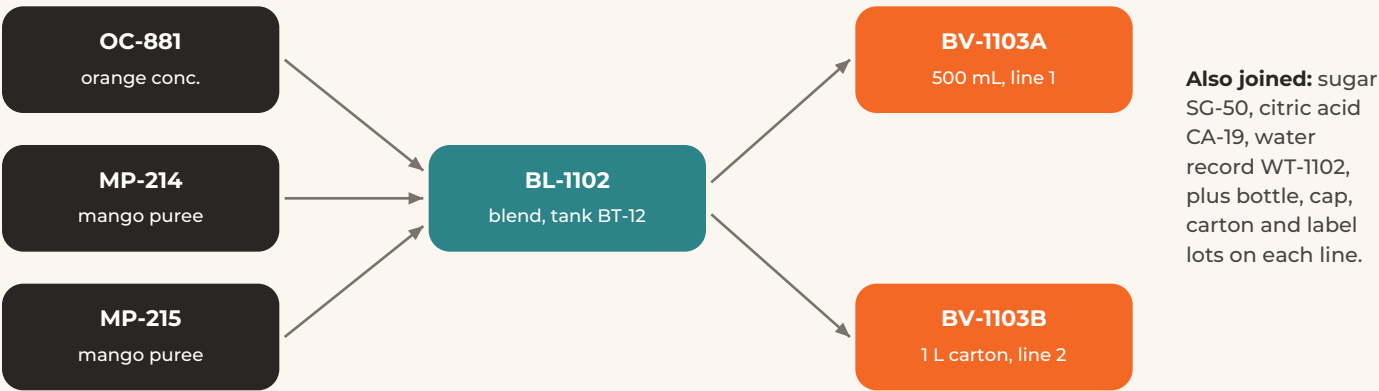
WHERE V5 FITS

V5 recipes hold blend revisions with two-signature approval; dispense records each addition against target with the lot scanned, from paired scales where connected, and keeps substitutions in the genealogy. Your team sets tolerances and who may approve a substitution.

MAKE / 02

One tank fills many runs.

Blend tanks join ingredient lots; fillers split tanks across lines, formats and days. Genealogy is the record of every join and split, with quantities, so a question about one lot reaches every related lot in both directions.



FROM	TO	QUANTITY	NOTE (WORKED EXAMPLE)
OC-881 + MP-214 + MP-215 + others	BL-1102	8,000 L	Blend R4, reconciled
BL-1102	BV-1103A	4,600 L	9,200 x 500 mL, line 1
BL-1102	BV-1103B	3,200 L	3,200 x 1 L, line 2
BL-1102	Loss / line fill	200 L	Recorded, not sold

Siblings share a question. BV-1103A and BV-1103B share a tank and every ingredient lot. A problem traced to the blend touches both; a problem on one line may touch only that run, but only that run's own evidence can show it. The record should let you tell those apart without assuming.

WHERE V5 FITS

V5 traceability records each dose, transfer and fill with lots and quantities, and shows the tree forward and back from any lot. Accuracy depends on recording every transfer, including partial tank draws, rework and line-fill losses.

MAKE / 03

Brix, pH and the results you rely on.

Blend and finished-lot tests show the product matches its specification. For some products, pH is also part of the legal definition that decides which rules apply, so the measurement deserves the same care as the result [3][4][5].



Brix is identity and labels

Brix ties concentrate to single-strength juice and supports percentage juice declarations under 101.30 [5].

pH can decide the route

Part 113 low-acid and Part 114 acidified definitions turn on finished equilibrium pH 4.6 [3][4].

Instruments need records

Refractometers and pH meters need calibration and standardisation records, or the result will not stand up.

TEST (WORKED EXAMPLE, TEAM-SET LIMITS)	RESULT	IN SPEC?
BL-1102 blend · Brix (spec 11.0–11.6)	11.3	YES
BL-1102 blend · pH (spec 3.80 max)	3.62	YES
BV-1103B start-up sample · Brix	10.6	OUT
BV-1103A finished lot · pH	Not back	PENDING

PRACTICE: PENDING IS A STATUS

A result that is not back stays visibly pending on the lot, so nobody reads a partial record as complete. An out-of-specification result opens an investigation before anyone re-tests to a pass.

WHERE V5 FITS

V5 laboratory sample plans record results against your specifications, keep pending tests visible and escalate out-of-specification results through an OOS workflow. Calibration records can block out-of-calibration instruments. Methods and limits stay with your lab.

Sources: [3], [4], [5] (linked on pages 21–22)

MAKE / 04

Clean lines and controlled changeovers.

Shared tanks, pipes and fillers carry over product, rinse water and allergens such as milk or nuts in some drinks. Where Part 117 applies, sanitation and food allergen controls are preventive controls when your hazard analysis calls for them (117.135) [2].

CHANGEOVER BEFORE BV-1103B (WORKED EXAMPLE)	RECORD	OK?
Previous product on line 2	Oat drink (contains oats)	n/a
Cleaning program run and recorded	Line 2, start 06:10	YES
Allergen verification result	Below your limit	YES
Line drained before fill	Not recorded	NO RECORD
Changeover signed by supervisor	Signed 07:02	YES



WHERE V5 FITS

V5 changeover checklists record cleaning, verification results and the supervisor's sign-off before the next product starts, if configured, and recipes carry allergens by revision. V5 does not control cleaning-in-place systems; your team sets cleaning programs and acceptance criteria.

Sources: [2] (linked on pages 21–22)

MAKE / 05

Right code, right label, right container.

The pack code is the link between a bottle on a shelf and the tank it came from. A wrong code, date or label version breaks the trace and can mean a withdrawal on its own.

PACK CHECK AT START AND CHANGE (WORKED EXAMPLE)	RECORD	OK?
Lot code printed and legible	BV-1103A / BV-1103B	YES
Best-before date matches the lot record	Same date on both runs	YES
Label version and juice percentage	Approved revision	YES
Correct cap, carton and closure for the SKU	500 mL / 1 L checked	YES
Labels issued, used, destroyed	Counts reconcile	YES

Date from evidence

Shelf life comes from your own studies and product knowledge, set by your team, not by software.

Check printed packs

Verify a printed sample against the lot record at start-up, after any change and at intervals your procedure sets.

Fill and closure

Fill volume and closure checks belong with the run; where your process depends on a seal, record the checks it requires.

PRACTICE: ONE CODE SOURCE

Print the code and date from the lot record rather than typing them at the coder. If a value must be keyed in, have a second person check the first printed pack and record it.

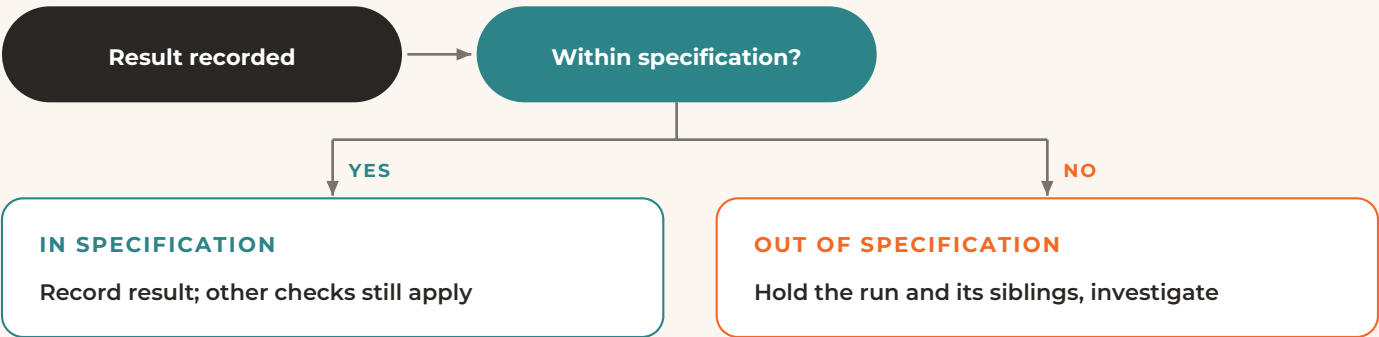
WHERE V5 FITS

V5 label design prints lot codes, dates and label content from the lot and recipe records, checks the barcode scheme at pack-out and prints the approved artwork revision on the record. Label wording is approved by your team.

HOLD / 01

One result out, worked end to end.

10:05: the start-up sample from carton run BV-1103B reads 10.6 Brix, below the 11.0 specification. The bottle run BV-1103A shares the tank and its own pH result is not back. Here is the decision path.



TIME	STEP (WORKED EXAMPLE)	STATUS
10:05	BV-1103B start-up Brix 10.6 recorded	Done
10:10	BV-1103B on hold; deviation DV-0662 opened	Done
10:15	BV-1103A held: same tank, own pH pending	Done
10:40	Changeover record: line drain not recorded	Done
11:20	Rest of BV-1103B re-sampled by lab	PENDING
11:45	QA records disposition for pallet P1	Done

Why both runs stay held. The low result points at line 2's start-up, but the blend is shared and BV-1103A's own result is pending. Neither run is cleared by assumption; each is released only on its own reviewed evidence.

WHERE V5 FITS

V5 can place lots on hold when your team links a deviation to them, lists siblings and shipments from the same tank and keeps the investigation with the lot. V5 does not decide whether a run is acceptable or safe.

HOLD / 02

A person decides, and the record says who.

Where Part 117 applies, corrective actions include evaluating affected food and preventing adulterated food from entering commerce (117.150); Part 120 sets corrective actions for juice HACCP plans (120.10) [1][2]. The decision belongs to a qualified person.

Release
Evidence shows the lot meets your criteria. Record the basis and who decided.

Rework or re-blend
Only where your procedures and the applicable rules allow, with the destination recorded.

Reject or destroy
Product cannot be sold. Record quantities, method and witness.

DISPOSITION RECORD FIELD	WORKED EXAMPLE
Segment	BV-1103B pallet P1, 380 cartons, line 2 start-up
Evidence	Start-up Brix result, changeover record, DV-0662
Decision	Pallet P1 rejected (worked example)
Rest of BV-1103B	On hold; re-sample result pending
Sibling BV-1103A	On hold; own pH result pending
Decided by	QA manager, e-signature, 11:45
Follow-up	Drain step added to changeover; CAPA CA-0418

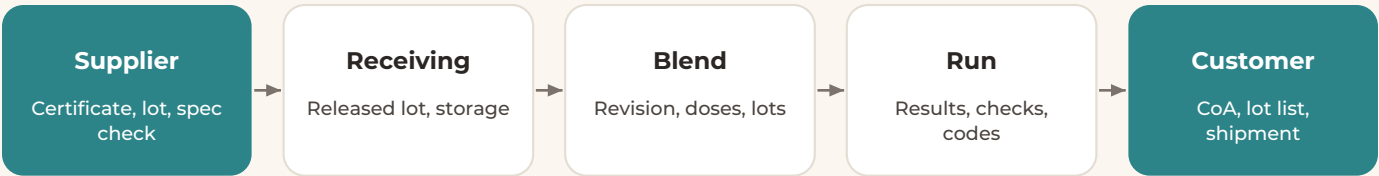
The example is not a rule. Another team, with other data, might reach a different decision. What matters is that each lot's decision, its basis and its owner are recorded, and that no affected lot is released before its own evidence is reviewed.

WHERE V5 FITS
V5's QC release queue shows each lot's results, holds, deviations and changeover records in one view. A named reviewer records the decision with an electronic signature. V5 never releases or rejects product automatically.

RESPOND / 01

From supplier certificate to customer certificate.

Many beverage customers, especially retailers and brand owners, ask for a certificate of analysis or lot evidence with each delivery. The quality of what you send out depends on what you kept coming in.



OUTGOING EVIDENCE (WORKED EXAMPLE)	SOURCE	READY?
Customer certificate for BV-1103A	Not issued while lot on hold	HOLD
Blend results (Brix, pH)	From BL-1102 lab record	YES
Finished-lot pH	Pending	PENDING
Ingredient lots listed	OC-881, MP-214, MP-215, SG-50, CA-19	YES
Shipment and consignee	None yet	n/a

Certificates from records

Generate customer certificates from the lab results, not by retyping them, so the document cannot disagree with the record.

Never ahead of release

An outgoing certificate should not be issued for a lot that is still on hold or has pending results.

Customer access

Some customers want to look up lots and documents themselves. A read-only portal can reduce email requests.

WHERE V5 FITS

V5 LIMS generates certificates from recorded results, and the customer portal can give customers read-only access to lot trace and certificates, depending on plan. Your team decides what is shared and when.

RESPOND / 02

What the traceability rules ask for.

Traceability is required in both the U.S. and the EU, but the rules differ in scope and detail. Know which apply to each product and ingredient before deciding what your records must capture.

TOPIC	WHAT THE RULE SAYS
EU general food law	One step back and one step forward for every food business operator (178/2002 Art. 18) [10]
EU on request	Supplier and customer information available to authorities on demand [10]
U.S. FSMA 204	Additional records for foods on the Food Traceability List, with exemptions [6][7]
Check the list	Classify each product and ingredient against the current list and its exclusions [7]
U.S. recall policy	Part 7 Subpart C sets out FDA's recall policy and procedures [8]

Internal trace is extra

EU Article 18 asks for one step either side; linking lots inside your plant is what lets you narrow a problem to one tank or run instead of a week of production.

Ingredients may be listed

Even where a finished drink is not on the Food Traceability List, check whether any ingredient you receive is, and what the rule then asks of you [6][7].

One record, many uses

The same genealogy supports recall work, customer requests and traceability records, if the data is captured at the right events.

WORKED EXAMPLE: THE SCOPE OF A QUESTION

If supplier lot MP-214 is later questioned, one step back is the supplier; one step forward is your blend BL-1102. Your internal genealogy then shows both runs BV-1103A and BV-1103B, and any other blend that used MP-214, so you can act on exactly those lots.

WHERE V5 FITS

V5 records lots, transformations and shipments, and FSMA 204 / EPCIS 2.0 publishing can push critical tracking events to a traceability repository where your plan includes it. Your team decides coverage and answers regulator requests.

RESPOND / 03

From one ingredient lot to every customer.

If an ingredient lot or a blend is in question, the first hours are about finding every lot it touched and every customer who received them, then deciding what to do with people who know the product.



Trace forward

From concentrate OC-881: every blend that used it, every run and pallet, every shipment and customer, with quantities and dates.

Trace back

From one pallet to its run, blend, every ingredient and packaging lot, and the test and changeover records.

Mock recall

Time it. Record what was found, what was missing and who did what, then repeat after changes.

WORKED EXAMPLE: MOCK RECALL FROM CONCENTRATE LOT OC-881 (A DIFFERENT, SHIPPED WEEK)

09:00	Exercise started by QA
09:08	Blends BL-1094 and BL-1102 identified
09:19	Runs, pallets and shipments listed
09:31	Stock on hand and on hold confirmed
09:52	Review: one co-packer file missing, CAPA raised

WHERE V5 FITS

V5 traces from an ingredient lot to blends, runs and shipments and back, records mock recalls with timings and keeps distribution records. Recall strategy, customer notices and regulator contact stay with your people.

Sources: [8] (linked on pages 21–22)

RESPOND / 04

The software you rely on.

Food rules rarely prescribe software validation the way device or drug rules do, but your records are only as good as the system that holds them. Know what it does, test it with your data and control its changes.

01 Define its job
Which records it holds, which checks it enforces and which decisions it supports.

02 Test with your data
Run your blends, limits, substitutions and edge cases before relying on it; keep the evidence.

03 Control change
Assess supplier releases and configuration changes before they reach production.

04 Keep a paper fallback
Decide how records are kept if the system or network is unavailable, and how they are entered later.

WHO DOES WHAT

You decide the intended use, test it and approve go-live, including any performance qualification your customers or certification scheme expect. **A supplier** can provide documentation and, where agreed, installation and operational qualification support. In V5's case, IQ/OQ and validation support are part of the Enterprise plan, scoped in the accepted quote or statement of work.

WHERE V5 FITS

V5 records configuration changes in an audit trail and releases software in versions, so you can see what changed. It does not make a HACCP or food safety plan compliant on its own.

APPLY / 01

Where V5 fits, and where it does not.

A plain map from the area to the V5 capability that keeps its record, and the decision that stays with you. Capabilities are from the V5 product reference reviewed 1 October 2026 and depend on plan and configuration.

AREA	V5 KEEPS THE RECORD	YOUR PEOPLE DECIDE
Ingredient intake	Receiving, certificates, lot status, holds	Specifications, release
Blend formula	Revisions, two-signature approval	Formula, change approval
Dosing	Dispense against target, scales if paired	Tolerances, substitutions
Tanks and runs	Transfers, fills, genealogy	Recording every transfer
Testing	LIMS results, pending, OOS workflow	Methods, limits
Process monitoring	HACCP check records, sensor logs if connected	Critical limits, validation
Changeover	Checklists, verification, sign-off	Cleaning programs, criteria
Pack codes	Label print, pack checks, counts	Label wording, shelf life
Release	QC release queue, e-signature	The decision itself
Customer evidence	Certificates from results, portal	What is shared
Recall	Lot trace, mock recall, shipments	Recall decision, notices

Coming soon, not available today: AI demand and yield forecasting and process anomaly detection.
Plan-dependent: sensor and device integration, EPCIS publishing, customer portal, and IQ/OQ and validation support (Enterprise only, scoped in the accepted quote or statement of work). **Not offered:** control of fillers, pasteurizers, CCP or cleaning equipment, process validation, or regulatory submissions.

WHERE V5 FITS

Nothing in V5 releases a lot, decides a disposition, sets a kill step, judges whether a drink is safe, reports to a regulator or starts a recall. It keeps the evidence connected so the qualified people who make those decisions can see it.

WORKSHEET 01

Release readiness for one packaging run.

Use with a real (or test) run record. Tick what the record shows today without asking anyone.

	SHOWN	PARTLY	NOT SHOWN
Ingredients released Every lot in the blend has a reviewed certificate and release	☐	☐	☐
Blend revision The approved revision used is on the record	☐	☐	☐
Dosing reconciled Actual against target, lots scanned, substitutions approved	☐	☐	☐
Genealogy complete Ingredient lots to blend to runs, with quantities	☐	☐	☐
Blend results Results your specification sets, in limit, instruments in calibration	☐	☐	☐
Process records Monitoring and verification your HACCP or food safety plan requires	☐	☐	☐
Changeover Cleaning, verification and drain steps recorded before the run	☐	☐	☐
Pack check Code, date and label version verified with counts	☐	☐	☐
Pending and siblings Pending results visible; sibling runs listed and their status shown	☐	☐	☐
Named decision Who decided, when, on what evidence	☐	☐	☐

NOTES AND OWNERS

WORKSHEET 02

Questions for any software demo.

Ask the vendor to show, not tell, using test data. Record what you saw.

	SHOWN	PARTLY	NOT SHOWN
Pending lot Try to dose a concentrate lot that is not released; show the block.	☐	☐	☐
Substitution Run out of one lot mid-dose; show the second lot in the genealogy.	☐	☐	☐
Old revision Try to start a blend on a superseded revision; show what happens.	☐	☐	☐
Split tank Fill one blend into two formats; show both runs.	☐	☐	☐
Out of spec Record a low Brix result; show the hold and the OOS workflow.	☐	☐	☐
Siblings From one run, list its siblings and their result status.	☐	☐	☐
Certificate Try to issue a customer certificate for a held lot.	☐	☐	☐
Trace From one ingredient lot, list runs and customers, timed.	☐	☐	☐
Calibration Fail a pH meter calibration; list affected results.	☐	☐	☐
Audit trail Show who changed a value, when and why.	☐	☐	☐

NOTES AND OWNERS

APPLY / 02

A fair evaluation in four weeks.

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

WEEK 1

Agree one product family and the five questions that matter most. Load blends, ingredients, specifications, lines and checks.

WEEK 2

Run a blend end to end with test data: receipts, dosing, tank, two runs, tests, changeover, pack checks, release review.

WEEK 3

Break it on purpose: unreleased lot, mid-dose substitution, low Brix, missing drain step, wrong label revision.

WEEK 4

Run a timed mock recall from one concentrate lot. Review with QA, production, lab, packaging and IT.

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

ASK V5

“We make [juice / soft drinks / RTD tea or coffee / other liquids] at [number] sites. Our hardest moment is [e.g. one tank filling two lines]. 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 product family in a trial workspace using test data. The assistant answers questions about features and plans; it does not give regulatory advice.

SOURCES

Keep the evidence close.

Primary sources behind this guide, checked 2 October 2026. Click a title to open the publisher's page.

- | | | |
|-----|---|--------------------------|
| [1] | <u>U.S. eCFR, 21 CFR Part 120: hazard analysis and critical control point (HACCP) systems for juice</u> | BINDING U.S. REGULATION |
| | https://www.ecfr.gov/current/title-21/chapter-I/subchapter-B/part-120 | |
| [2] | <u>U.S. eCFR, 21 CFR Part 117: CGMP and hazard analysis and risk-based preventive controls</u> | BINDING U.S. REGULATION |
| | https://www.ecfr.gov/current/title-21/chapter-I/subchapter-B/part-117 | |
| [3] | <u>U.S. eCFR, 21 CFR Part 113: thermally processed low-acid foods in hermetically sealed containers</u> | BINDING U.S. REGULATION |
| | https://www.ecfr.gov/current/title-21/chapter-I/subchapter-B/part-113 | |
| [4] | <u>U.S. eCFR, 21 CFR Part 114: acidified foods</u> | BINDING U.S. REGULATION |
| | https://www.ecfr.gov/current/title-21/chapter-I/subchapter-B/part-114 | |
| [5] | <u>U.S. eCFR, 21 CFR 101.30: percentage juice declaration</u> | BINDING U.S. REGULATION |
| | https://www.ecfr.gov/current/title-21/chapter-I/subchapter-B/part-101/subpart-B... | |
| [6] | <u>U.S. eCFR, 21 CFR Part 1 Subpart S: additional traceability records for certain foods</u> | BINDING U.S. REGULATION |
| | https://www.ecfr.gov/current/title-21/chapter-I/subchapter-A/part-1/subpart-S | |
| [7] | <u>U.S. FDA, Food Traceability List</u> | FDA INFORMATION PAGE |
| | https://www.fda.gov/food/food-safety-modernization-act-fsma/food-traceability-l... | |
| [8] | <u>U.S. eCFR, 21 CFR Part 7: enforcement policy (recalls, Subpart C)</u> | U.S. REGULATION / POLICY |
| | https://www.ecfr.gov/current/title-21/chapter-I/subchapter-A/part-7 | |

SOURCES

Sources, continued.

[9] **U.S. TTB (Alcohol and Tobacco Tax and Trade Bureau): alcohol beverage regulation**
<https://www.ttb.gov/>

U.S. AGENCY INFORMATION

[10] **Regulation (EC) No 178/2002: general food law, including Article 18 traceability**
<https://eur-lex.europa.eu/eli/reg/2002/178/oj>

BINDING EU REGULATION

[11] **Regulation (EC) No 852/2004: hygiene of foodstuffs**
<https://eur-lex.europa.eu/eli/reg/2004/852/oj>

BINDING EU REGULATION

[12] **Codex Alimentarius, General Principles of Food Hygiene (CXC 1-1969)**
<https://www.fao.org/fao-who-codexalimentarius/codex-texts/codes-of-practice/en/>

VOLUNTARY INTERNATIONAL CODE

How to read the status labels. Binding regulations are law in their jurisdiction. FDA and TTB information pages explain and announce; the TTB entry points to the agency that administers U.S. alcohol beverage permits and labeling, not to a specific rule. Codex texts are voluntary international standards. EU regulations are cited by their official reference; check the consolidated version.

SCOPE AND LIMITS

This guide is practical orientation for evaluating beverage and liquid food operations and software. It is not legal or regulatory advice and does not list every requirement that applies to you. It covers U.S. federal rules with EU scope notes; alcoholic beverages are noted only for scope. State, national, customer and certification requirements add to them. Regulatory text was checked on 2 October 2026; confirm the current text before relying on it. 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 set or validate kill steps, control fillers, pasteurizers, CCP or cleaning equipment, judge product safety, release or reject lots, report to regulators or decide recalls, and does not by itself make you compliant. Photography is illustrative; lots, limits and results are worked examples, not customer data.



One blend tank. Every bottle traced.

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