

Lotus root - Proposed inspection method pack

Proposed order inspection plan | Lotus root | As of 2026-10-16

Proposed order inspection methods. Agree the SKU, sample state, sampling plan and acceptance criteria with GreenLand and the processor before use. Source standards retain their stated scope.

This is a proposed inspection plan, not a certificate, completed test or lot result. No sample size, AQL or numeric limit is created by this document.

Cut-surface colour

Method status: proposed-contract-method. Proposed for agreement on an order; not a universal standard.

Definition

Cut-face color at a named process/arrival stage; enzymatic or storage browning must be separated from natural cultivar color.

Sample state

Matched fresh-cut, post-treatment, post-freeze and arrival frozen/thawed aliquots; use identical thaw/exposure conditions for comparisons.

Sampling approach

Keep slice form and processing run separate; take unopened packs from start, middle and end and dispersed cartons. Inspect an agreed counted slice set plus a weighed fine fraction; retain paired process-time and arrival samples where color is disputed.

Inspection steps

At fixed elapsed times place slices under controlled lighting, photograph with color reference, and measure $L^*a^*b^*$ on the same anatomical cut-face position.

Calculation or reproducible observation

ΔE^* against signed reference and $L^*a^*b^*$ values; discolored slices / inspected slices x 100% using signed visual boundary.

Proposed control response

Review cut-to-treatment delay, water quality/approved anti-browning step and pack oxygen; retain process-stage split.

Evidence to retain

Timestamped stage photos, instrument calibration, raw-material variety, temperature and slice-position log.

Release or disposition

Hold only against agreed stage-specific color band; investigate arrival change before assigning factory fault.

Buyer consequence

Prevents rejection based on unmatched exposure time or lighting.

Source boundary

USDA/Codex/source material informs product vocabulary or risk; the stated operational calculation, control and acceptance rule are proposed for an order, not a universal standard.

Applicability and use boundary

For this proposed order method, we would confirm the SKU, sample condition, signed acceptance basis and factory control with the actual processor and buyer before use. This card is not an inspected-lot result or a statement of installed GreenLand capability.

Source references

P01: 2015 archive only; not current Codex text. Scope: 2015 archive only; not current Codex text URL:

https://www.fao.org/input/download/standards/13928/CXS_320e_2015.pdf ARCHIVE NOTE: 2015 archived source; not current text.

Cleanliness inside holes

Method status: proposed-contract-method. Proposed for agreement on an order; not a universal standard.

Definition

Sand or foreign matter inside natural lotus-root holes is separate from the normal cavity pattern and from discolored tissue.

Sample state

Frozen exterior view followed by hygienic thaw and cut/flush inspection; do not treat a dark cavity shadow as dirt.

Sampling approach

Keep slice form and processing run separate; take unopened packs from start, middle and end and dispersed cartons. Inspect an agreed counted slice set plus a weighed fine fraction; retain paired process-time and arrival samples where color is disputed.

Inspection steps

Count cavities on representative slices; inspect with directed light and split suspect cavities; filter rinse water and identify retained particles.

Calculation or reproducible observation

Contaminated slices / all inspected slices x 100%; recovered mineral/foreign mass mg per kg net examined product where gravimetry is feasible.

Proposed control response

Improve field wash, cavity flushing, sorting and rinse-water filtration; isolate lots with true foreign matter.

Evidence to retain

Cavity photos before/after splitting, filtered residues, rinse condition, affected slice count and lot trace.

Release or disposition

Foreign matter or unknown residue triggers hold and identification; natural holes alone are not defects.

Buyer consequence

Avoids both hidden grit complaints and false rejects of normal anatomy.

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Fibre and maturity

Method status: proposed-contract-method. Proposed for agreement on an order; not a universal standard.

Definition

Excessive stringing/woody vascular tissue in cooked lotus-root slices, separate from normal crispness.

Sample state

Cooked only after the approved lotus-root product process and buyer use conditions; paired frozen slice retained.

Sampling approach

Keep slice form and processing run separate; take unopened packs from start, middle and end and dispersed cartons. Inspect an agreed counted slice set plus a weighed fine fraction; retain paired process-time and arrival samples where color is disputed.

Inspection steps

Code samples; bend/cut cooked slices at fixed orientation; score persistent strings and compare instrumental shear if used against a signed reference lot.

Calculation or reproducible observation

Stringy slices / cooked inspected slices x 100%, plus shear force N with blade geometry; report stage and slice orientation.

Proposed control response

Review raw maturity, segment selection and trim position; sort suspect roots before slicing.

Evidence to retain

Harvest/segment identity, coded cooked images, process trace, force settings and panel notes.

Release or disposition

Hold or redirect on agreed application score; do not call mere crispness a maturity failure.

Buyer consequence

Protects uniform bite in hotpot or prepared-food use.

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Slice thickness distribution

Method status: proposed-contract-method. Proposed for agreement on an order; not a universal standard.

Definition

Slice thickness is the distance between two cut faces; oblique slices require a defined normal-to-face measurement, not longest edge.

Sample state

Firm frozen slices with frost removed non-destructively.

Sampling approach

Keep slice form and processing run separate; take unopened packs from start, middle and end and dispersed cartons. Inspect an agreed counted slice set plus a weighed fine fraction; retain paired process-time and arrival samples where color is disputed.

Inspection steps

Caliper center and thickest sound zone, excluding broken edge; record oblique orientation and irregular edge as separate flags.

Calculation or reproducible observation

Thickness in mm distribution with median/range; out-of-band slices / measured slices x 100%, band set by contract.

Proposed control response

Adjust slicer blade spacing and feed alignment; inspect blade wear.

Evidence to retain

Per-slice measurements, caliper calibration, orientation photos and machine settings.

Release or disposition

Hold/regrade only against signed thickness band and intended cooking-time requirement.

Buyer consequence

Reduces uneven cook and unpredictable packaging fill.

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Intact slice proportion

Method status: proposed-contract-method. Proposed for agreement on an order; not a universal standard.

Definition

Broken slice means loss of the signed minimum ring/segment continuity; evaluate breakage at frozen, standardized thaw and cooked stages separately.

Sample state

Three matched splits from the same lot, each assigned to frozen, controlled-thaw or approved cooked trial.

Sampling approach

Keep slice form and processing run separate; take unopened packs from start, middle and end and dispersed cartons. Inspect an agreed counted slice set plus a weighed fine fraction; retain paired process-time and arrival samples where color is disputed.

Inspection steps

Count complete and fractured slices before handling; apply identical thaw/cook/transfer; count new fractures, retaining pre-existing cracks separately.

Calculation or reproducible observation

Stage-specific broken slices / inspected slices x 100%; incremental breakage = post-stage broken count minus pre-stage broken count divided by starting count x 100%.

Proposed control response

Review cut thickness, freezing, packing compression and thaw/cook handling.

Evidence to retain

Paired stage photos, counts, pack position, thaw/cook conditions and transport observations.

Release or disposition

Use stage-specific signed limits; never charge supplier for fractures created by an unagreed destructive test.

Buyer consequence

Distinguishes supplier damage from customer preparation losses.

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