

Purpose & Zero-Vendor-Vial Rule: Every sample tested under the Open Peptide Standard is procured anonymously at retail through ordinary consumer channels. We **never accept vendor-submitted vials or vendor Certificates of Analysis**. This SOP governs every step from secret-shopper checkout through -20°C archival retention, blind ISO/IEC 17025 lab shipment, and 7-day publication.

1. FIVE-STAGE BLIND CHAIN-OF-CUSTODY WORKFLOW

STAGE	REQUIRED OPERATIONAL ACTION	AUDIT & TAMPER EVIDENCE	CUSTODIAN / FIREWALL
Stage 1: Blind Retail Procurement	Order 2–3 matching sealed vials of the target compound/batch via standard retail checkout using an unannounced consumer name, residential/commercial delivery address, and non-corporate payment card.	Archive PDF invoice, checkout timestamp, payment confirmation, and carrier tracking number in the intake ledger.	Queue kept confidential until parcel is delivered.
Stage 2: Unopened Package Intake	Upon delivery, inspect outer mailer before opening. Photograph (and/or continuous-video record) the sealed shipping label, inner packaging, vial crimp caps, printed batch/lot number, and expiration date.	High-resolution EXIF/SHA-256 timestamped intake photo set assigned to blind sample ID OPP-YYYY-NNN.	Intake Coordinator (logged in Chain-of-Custody sheet).
Stage 3: Blind Relabeling & -20°C Archival Split	Vial A (Lab Sample): Mask or remove identifying vendor branding and affix only the blind barcode/ID (OPP-YYYY-NNN-A) + compound name and labeled mg. Vial B (Retention Sample): Seal intact with original vendor label inside a serialized tamper-evident bag (OPP-YYYY-NNN-B) and place in locked -20°C manual-defrost archival storage.	Continuous 24/7 NIST-traceable glycol-probe Wi-Fi temperature telemetry + serialized tamper-bag seal number.	Lab never learns vendor/brand name; Vial B held 6–12 months.
Stage 4: Accredited ISO/IEC 17025 Lab Dispatch	Ship Vial A in an insulated mailer with cold pack and tracked priority courier to a contracted ISO/IEC 17025 laboratory (scope covering RP-HPLC, LC-MS/HRMS identity, content assay, and USP <85> kinetic LAL endotoxin).	Outbound tracking log + lab sample receipt timestamp recorded on public Arrival Log at /tests/.	≥10% of batches + all disputed Fail retests routed to unaffiliated Referee Lab.
Stage 5: 7-Day Auto-Publication	Within 7 calendar days of receiving the signed lab CoA, publish the complete batch report: grade badge (A+, Pass, Caution, or Fail), full chromatogram, LC-MS spectrum, intake photos, and batch/lot number.	Signed PDF CoA + raw chromatogram + intake/publication timestamps published permanently on /tests/.	Automatic publication pass or fail; zero sponsor preview or takedown rights.

2. COLD-STORAGE & BACKUP POWER SPECIFICATION

- Manual-Defrost Constant -20°C Chamber:** All retention vials (Vial B) are stored in a dedicated manual-defrost freezer (no auto-defrost heating cycles) maintained at -20°C to -24°C inside light-shielded polycarbonate cryoboxes with desiccant.
- NIST-Traceable Telemetry:** A calibrated glycol-buffered probe logs temperature continuously with automated SMS/email excursion alerts if the chamber rises above -15°C.
- Automatic UPS & Generator Redundancy:** The freezer runs through an inline LiFePO4 Uninterruptible Power Supply (UPS) providing 24–48+ hours of automatic battery runtime during utility outages, backed by generator power for multi-day outages.
- Retention Window:** Minimum **6 months** from publication date for A+ / Pass batches and **12 months** for Caution / Fail batches.

3. DISPUTED BATCH & REFEREE LAB RETEST RULE

- One Published Retest Rule for Everyone:** If a batch scores Caution or Fail (or exhibits an analytical anomaly), the initial result is still published within the 7-day window with a note if a referee retest is underway.
- Sealed Retention Vial (Vial B) Only:** Any verification retest is performed strictly using the unopened Vial B stored in our locked -20°C archive (verifying the tamper-evident bag seal number on camera before shipping)—never a new vial sent by the vendor.
- Independent Referee Lab:** Referee retests are sent under a new blind code to a second, unaffiliated ISO/IEC 17025 laboratory. Both the original CoA and the referee CoA are published side by side on the batch report.

4. SAMPLE INTAKE & CHAIN-OF-CUSTODY RECORD FIELDS (PUBLISHED WITH EVERY BATCH REPORT)

Blind Sample ID OPP-YYYY-NNN-A / B	Retail Order & Arrival Dates Checkout & intake timestamps	Printed Lot # & Exp Date Photographed before masking	Tamper Seal & -20°C Box Slot Bag serial # + cryobox grid ID
Inbound / Outbound Tracking Redacted carrier receipt logs	ISO/IEC 17025 Lab & Scope Anchor Lab or Referee Lab ID	Lab Report Arrival Date Logged on /tests/ arrival table	Public Release Date (≤7d) Full CoA + chromatogram URL