

Node 3 – Lab Analysis & Verification

3a. Test Report Authenticity Check

FoodLabz ensures every Certificate of Analysis (CoA) is genuine, valid, and NABL-compliant.

The diagram shows a Certificate of Analysis (CoA) form with several fields and a table. Callouts point to specific parts of the form:

- Lab Identity Match:** Points to the Lab Name and Lab Address fields.
- Accreditation Check:** Points to the NABL logo.
- ULR Format Check:** Points to the ULR Number field.
- Scope Verification:** Points to the TEST PARAMETERS table.
- Validated Fields:** Points to the TEST PARAMETERS table.

CERTIFICATE OF ANALYSIS

Accreditation Certificate No: TC0575

ULR Number: 01234567890012334567

TEST PARAMETERS	RESULTS
Appearance	Visual Inspection
pH	ISO 10523:2012
Chloride Content	ASTM D512-12
Purity	In-house method

Reviewed by: _____

This is an electronically generated document.

1. **Lab Accreditation Check** – AI reads the NABL Accreditation Number and cross-verifies it with the latest NABL database for validity and expiry.
2. **ULR Verification** – Decodes the 18-digit ULR number to confirm lab identity, year, location, serial sequence, and scope (Full/Partial).
3. **Lab Identity Match** – Matches lab name, address, and logo on the report with NABL records to prevent impersonation.
4. **Scope Validation** – Confirms each test parameter is within the lab's approved NABL scope and method list.
5. **Anomaly Detection** – Flags missing ULR, mismatched data, unusual numbering, etc

3b. Test Scope Validity

Matches reported parameters against the lab's approved NABL scope and method list, flagging any out-of-scope tests.

3c. Lab Testing Process Assurance

Validates that reported tests were actually conducted by checking:

- Instrument-generated raw data files
- Machine metadata
- Digital signatures are unique to each report

LAB TEST VERIFICATION

- ✓ Raw Data Integrity Check
- ✓ Digital Signature Verification
- ⚠ Calibration Validation



DIGITALLY SIGNED

Instrument ID LC-12345

Calibration Date –

Operator ID OP-001

Timestamp 2024-04-24 15

Chromatogram

