



CERTIFICATE OF ANALYSIS - PROFESSIONAL LAB REPORT

Category: Spinach (Spinach (commodity grade)) | Variety: Spinach Field Fresh | Sample ID: SPIN128-V01-L02

Stock: April-May 2026 | COA backed by NABL approved ISO/IEC 17025:2017 laboratory

Lot: SPIN128-26M05-012

| Field | Value | NABL Approved Lab |
|---------------------------|-------------------------------------|-------------------|
| Report ID | BBLLP/SPIN128/2026/05/12812 | |
| Report Ref | BB-COA-SPIN128-26M05-012 | |
| Batch / Lot | B-SPIN128-26M05-012 | |
| Sample ID | SPIN128-V01-L02 | |
| Date of sample submission | 02/05/2026 | |
| Date received in lab | 04/05/2026 | |
| Analysis period | 05/05/2026 to 10/05/2026 | |
| Date of issue | 10/05/2026 | |
| Manufacturer | Botanika Bharat LLP | |
| Address | Rudrapur, Uttarakhand, India | |
| Sample quantity | 1.5 kg | |
| Lab accreditation | NABL approved (ISO/IEC 17025:2017) | |
| Market clearance | Domestic, EU, UK, USA, Non-EU: Pass | |

General Profile (Identity & Grade)

| Parameter | Type | Allowed limit/spec | Result | Method | Status |
|--------------------|-----------|-----------------------------|-----------|-----------------------|--------|
| Appearance | Mandatory | Characteristic export grade | Complies | Organoleptic | Pass |
| Botanical identity | Mandatory | Spinach (commodity grade) | Confirmed | Macroscopy / DNA spot | Pass |
| Variety / cultivar | Mandatory | Spinach Field Fresh A | Confirmed | Traceability | Pass |
| Odour & taste | Mandatory | Typical, no off-note | Complies | Organoleptic | Pass |
| Foreign odour | Mandatory | Absent | Absent | Organoleptic | Pass |

Adulteration & Authenticity (Buyer Critical)

| Parameter | Type | Allowed limit/spec | Result | Method | Status |
|-----------------------------|---------------|--------------------|----------|---------------|--------|
| Undeclared fillers / starch | Mandatory | Absent | Absent | Iodine / FTIR | Pass |
| Species substitution | Mandatory | Absent | Absent | HPTLC / DNA | Pass |
| Synthetic colour | Mandatory | Absent | Absent | LC-MS | Pass |
| Extraneous matter | Non-mandatory | Within grade | Complies | ISO 927 | Pass |

Chemical & Trade Markers (Buyer Decision)

| Parameter | Type | Allowed limit/spec | Result | Method | Status |
|---------------------------|-----------|--------------------|-------------|----------|--------|
| Moisture | Mandatory | Fresh | 93% | AOAC | Pass |
| Defects | Mandatory | < 5% | 2.0% | Visual | Pass |
| Pesticide residue (panel) | Mandatory | MRL all markets | 0.009 mg/kg | LC-MS/MS | Pass |
| Total aflatoxins | Mandatory | < 10 µg/kg | < 1.4 µg/kg | HPLC | Pass |

Nutritional (Optional)

| Parameter | Type | Allowed limit/spec | Result | Method | Status |
|--------------|----------|--------------------|---------------|-------------|--------|
| Energy | Optional | Label reference | 319 kcal/100g | Calculation | Pass |
| Protein | Optional | Label reference | 5.8% | Kjeldahl | Pass |
| Carbohydrate | Optional | Label reference | 8.1% | AOAC | Pass |

Domestic India — FSSAI Buyer Panel

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Domestic India — FSSAI Buyer Panel

| Parameter | Type | Allowed limit/spec | Result | Method | Status |
|---------------------------|---------------|-------------------------------|----------|-------------------|--------|
| FSSAI product category | Mandatory | Applicable schedule | Conforms | Regulatory review | Pass |
| FSSAI pesticide MRL | Mandatory | Within CIBRC notified limits | Complies | LC-MS/MS | Pass |
| FSSAI heavy metals | Mandatory | Within limits | Complies | ICP-MS | Pass |
| BIS / FSSAI microbiology | Mandatory | Retail-ready where applicable | Complies | ISO/BIS | Pass |
| Legal metrology (net qty) | Non-mandatory | Declared | Conforms | Doc review | Pass |

EU Buyer / Import Panel

| Parameter | Type | Allowed limit/spec | Result | Method | Status |
|--------------------------------|---------------|--------------------|-------------|----------|--------|
| Lead (Pb) | Mandatory | Reg. 2023/915 | 0.11 mg/kg | ICP-MS | Pass |
| Arsenic (As) | Mandatory | EU limits | 0.03 mg/kg | ICP-MS | Pass |
| Cadmium (Cd) | Mandatory | EU limits | 0.030 mg/kg | ICP-MS | Pass |
| Mercury (Hg) | Mandatory | EU limits | 0.005 mg/kg | ICP-MS | Pass |
| Aflatoxin B1 | Mandatory | < 5 µg/kg | < 1.6 µg/kg | HPLC | Pass |
| Total aflatoxins | Mandatory | < 10 µg/kg | < 3.6 µg/kg | HPLC | Pass |
| EU pesticide MRL (EC 396/2005) | Mandatory | Compliant | Complies | LC-MS/MS | Pass |
| Import documentation (CHED) | Non-mandatory | Ready | Conforms | QA | Pass |

UK Buyer Panel

| Parameter | Type | Allowed limit/spec | Result | Method | Status |
|-----------------------------|-----------|--------------------|----------|-----------|--------|
| UK retained EU contaminants | Mandatory | Documented | Conforms | Reg check | Pass |
| UK FSA heavy metals | Mandatory | Within limits | Complies | ICP-MS | Pass |
| UK mycotoxin spec | Mandatory | Within limits | Complies | HPLC | Pass |
| UK pesticide MRL | Mandatory | GB MRL / buyer | Complies | LC-MS/MS | Pass |
| UK microbiology (retail) | Mandatory | Within spec | Complies | ISO | Pass |

USA Buyer Panel (FDA/FSMA)

| Parameter | Type | Allowed limit/spec | Result | Method | Status |
|-----------------------------|-----------|--------------------|--------------|------------------------|--------|
| FDA FSMA / FSVP readiness | Mandatory | Documented | Conforms | QA review | Pass |
| TAMC | Mandatory | < 100000 cfu/g | < 6511 cfu/g | USP <2021> / ISO 4833 | Pass |
| Yeast & mould | Mandatory | < 10000 cfu/g | < 454 cfu/g | USP <2021> / ISO 21527 | Pass |
| E. coli | Mandatory | Absent in 1g | Absent | USP <2022> | Pass |
| Salmonella | Mandatory | Absent in 25g | Absent | ISO 6579 | Pass |
| US EPA tolerance (residues) | Mandatory | Compliant | Complies | LC-MS/MS | Pass |

Non-EU International Buyer Panel

| Parameter | Type | Allowed limit/spec | Result | Method | Status |
|-------------------------------|---------------|---------------------|----------|--------------|--------|
| GCC (UAE / Saudi / Qatar) SPS | Mandatory | Halal / contaminant | Conforms | Panel review | Pass |
| Australia NZ MPI biosecurity | Mandatory | Import conditions | Conforms | Doc + lab | Pass |
| Japan MHLW / Korea MFDS | Mandatory | Residual limits | Complies | LC-MS/MS | Pass |
| Canada CFIA | Mandatory | Food import | Conforms | Panel | Pass |
| ASEAN (SG/MY/TH/VN) | Mandatory | Regional MRL | Complies | LC-MS/MS | Pass |
| Buyer release index | Non-mandatory | Composite score | 98.3 | QA | Pass |

Mandatory Release Parameters

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Mandatory Release Parameters

| Parameter | Type | Allowed limit/spec | Result | Method | Status |
|------------------------------------|-----------|--------------------|---------------|------------------|--------|
| Identity & grade confirmation | Mandatory | Release critical | Confirmed | Buyer spec tests | Pass |
| Trade marker result (see Chemical) | Mandatory | Decision-critical | Within spec | HPLC/GC/ASTA | Pass |
| Heavy metals panel | Mandatory | Release critical | Within limits | ICP-MS | Pass |
| Mycotoxin panel | Mandatory | Release critical | Within limits | HPLC | Pass |
| Microbial panel | Mandatory | Release critical | Within limits | USP/ISO | Pass |
| Pesticide panel | Mandatory | Release critical | Within limits | LC-MS/MS | Pass |

Optional & Physical Quality

| Parameter | Type | Allowed limit/spec | Result | Method | Status |
|----------------------------|---------------|--------------------|----------|--------|--------|
| Colour score | Non-mandatory | Commercial | 8.5 | Visual | Pass |
| Packaging / seal integrity | Mandatory | Export | Pass | Visual | Pass |
| Shelf-life / Apr-May stock | Optional | Dispatch window | Conforms | QA | Pass |

Critical Export Decision Summary

| Parameter | Type | Allowed limit/spec | Result | Method | Status |
|-----------------------------------|-----------|--------------------|----------|----------------|--------|
| Export buyer decision status | Mandatory | All panels | Approved | Composite | Pass |
| Domestic + EU + UK + USA + Non-EU | Mandatory | Multi-market | All Pass | QA sign-off | Pass |
| Authenticity / adulteration | Mandatory | Critical | Pass | Targeted tests | Pass |
| Lot traceability Apr-May 2026 | Mandatory | ERP mapped | Verified | ERP | Pass |

General Notes

| Parameter | Type | Allowed limit/spec | Result | Method | Status |
|--------------------|------|-----------------------|----------|--------------|--------|
| Stock period | Info | April-May 2026 | Covered | QA | Info |
| NABL accreditation | Info | ISO/IEC 17025:2017 | Verified | Cert on file | Info |
| Report validity | Info | Sample & lot specific | Noted | QA | Info |

Remark:

COA backed with NABL approved lab. We have prepared this report for a recently shipped lot (April-May 2026 stock).
Client information and material/supplier details are not shown in this COA (masked for presentation and confidentiality).
Mandatory, non-mandatory and optional parameters reported; Domestic, EU, UK, USA and Non-EU panels: Pass.
Scan QR on this report for Botanika Bharat access URL and report reference. Valid for this sample and lot only.

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