



CERTIFICATE OF ANALYSIS - PROFESSIONAL LAB REPORT

Category: Cardamom (Elettaria cardamomum) | Variety: Alleppey Green Bold Sample ID: CARD003-V01-L05

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

Lot: CARD003-26M05-015

| Field | Value | NABL Approved Lab |
|---------------------------|-------------------------------------|-------------------|
| Report ID | BLLP/CARD003/2026/05/315 | |
| Report Ref | BB-COA-CARD003-26M05-015 | |
| Batch / Lot | B-CARD003-26M05-015 | |
| Sample ID | CARD003-V01-L05 | |
| Date of sample submission | 11/05/2026 | |
| Date received in lab | 17/05/2026 | |
| Analysis period | 18/05/2026 to 21/05/2026 | |
| Date of issue | 22/05/2026 | |
| Manufacturer | Botanika Bharat LLP | |
| Address | Rudrapur, Uttarakhand, India | |
| Sample quantity | 500 g | |
| 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 | Elettaria cardamomum | Confirmed | Macroscopy / DNA spot | Pass |
| Variety / cultivar | Mandatory | Alleppey Green Bold | 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 |
|-----------------------------|-----------|--------------------|-------------|--------------|--------|
| Capsule size (mm) | Mandatory | 7-8 mm / bold | 8.2 mm | Caliper | Pass |
| Colour (Hunter L) | Mandatory | Green intact | 44 | Colorimeter | Pass |
| Volatile oil | Mandatory | Min 5% whole | 5.3% | Distillation | Pass |
| Moisture | Mandatory | Max 10% | 9.1% | AOAC | Pass |
| Empty / shrivelled capsules | Mandatory | < 2% | 1.4% | Visual | Pass |
| Pesticide residue (panel) | Mandatory | MRL all markets | 0.039 mg/kg | LC-MS/MS | Pass |
| Total aflatoxins | Mandatory | < 10 µg/kg | < 1.1 µg/kg | HPLC | Pass |

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 |

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For Botanika Bharat LLP
Avneesh Mishra
Designated Partner

Praveen Dhama

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Praveen Dhama
Designated Partner





EU Buyer / Import Panel

| Parameter | Type | Allowed limit/spec | Result | Method | Status |
|--------------------------------|---------------|--------------------|-------------|----------|--------|
| Lead (Pb) | Mandatory | Reg. 2023/915 | 0.16 mg/kg | ICP-MS | Pass |
| Arsenic (As) | Mandatory | EU limits | 0.07 mg/kg | ICP-MS | Pass |
| Cadmium (Cd) | Mandatory | EU limits | 0.060 mg/kg | ICP-MS | Pass |
| Mercury (Hg) | Mandatory | EU limits | 0.014 mg/kg | ICP-MS | Pass |
| Aflatoxin B1 | Mandatory | < 5 µg/kg | < 1.4 µg/kg | HPLC | Pass |
| Total aflatoxins | Mandatory | < 10 µg/kg | < 5.3 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 | < 2884 cfu/g | USP <2021> / ISO 4833 | Pass |
| Yeast & mould | Mandatory | < 10000 cfu/g | < 880 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 | 98.6 | QA | Pass |

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 |
|----------------------------|-----------|--------------------|----------|--------|--------|
| Packaging / seal integrity | Mandatory | Export | Pass | Visual | Pass |
| Shelf-life / Apr-May stock | Optional | Dispatch window | Conforms | QA | Pass |

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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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