



Our quality charter

OFDA 2000 metrological control programme · Version 3.0 · September 2026

OFDA 2000 fibre test - Fibre Lab metrological control programme (charter v3.0)

Measurement on the OFDA 2000 in staple mode, using an in-house method derived from IWTO-47. Documented internal checks every test day and for every batch. **Internal metrology control programme - in-house method derived from IWTO-47.** Rigor rests on the procedure described below.

Fibre Lab and Co. measures your fibres on **OFDA 2000** - in staple mode. Our measurement method is derived from IWTO-47. It was installed and commissioned in our laboratory in Saulzoir in the presence of **Mark Brims**, designer of the OFDA technology. Each test day, the internal autotest on calibration fibres is checked. Every batch includes a reference staple. Options (washing, correction factor, Trim High) are always shown on the report.

A test result is only meaningful if the process that produces it is rigorous, repeatable and transparent. This charter describes how Fibre Lab and Co. prepares, measures, controls and reports every sample. It is intended for breeders, spinners, associations and commercial partners.

On request, we issue a statement of conformity with this programme free of charge, within one week.

1. Our commitment

- Every sample is handled according to a written procedure, identical from one batch to the next.
- The instrument is an OFDA 2000. Our method for measuring diameter and its distribution is an in-house method derived from IWTO-47, which applies to cleaned and conditioned samples: we measure raw staples and apply a correction factor for each herd; for the washed fibre analysis (F-AW), each staple is washed according to our internal protocol, dried and conditioned to laboratory ambient conditions, then measured without a correction factor.
- Results are neither adjusted nor rounded to suit a selection target. Any processing option (Trim High, correction factor) is stated explicitly on the report.
- If a quality control check falls outside acceptance limits, testing is suspended until control is restored.
- The client receives a clear report: mean, SD, CV, comfort factor, curvature, spinning fineness, histogram and profile along the staple.

2. Commissioning by the manufacturer

When the OFDA 2000 was installed in our laboratory in Saulzoir, Mark Brims - historical designer of OFDA technology and representative of the Australian manufacturer - came on site.

That visit covered installation of the instrument, verification of its operation, initial settings and manufacturer validation of commissioning. It is the starting point of the instrument's follow-up file.

Installation and initial validation by the manufacturer establish that the instrument was commissioned in accordance with the manufacturer's specifications. Internal metrology control programme - in-house method derived from IWTO-47. The quality of our tests rests on documented daily controls.

3. Quality control programme (8 points)

Tests are carried out using an in-house method derived from IWTO-47, applied in the same way to all animal and plant fibres we receive: alpaca, llama, mohair, cashmere, angora, sheep wool, yarns and plant fibres. This framework is complemented by our internal control programme, documented and identical from one batch to the next.

CQ-1 - Built-in OFDA 2000 autotest (daily)

Fibre Lab and Co.'s OFDA 2000 operates in staple mode: there is no 70 × 70 mm glass slide (OFDA 100 snippets mode). Current calibration is that of the instrument: autotest on internal calibration fibres of known diameters (typically 10 to 100 µm). Checked at the start of each test day. If the autotest falls outside the manufacturer's tolerance, no client series is started.

CQ-2 - Measurement bench

Verification of the staple support (OFDA 2000 grid / plate), lighting and travel. Any spreading or guidance fault stops the series.

CQ-3 - Batch reference sample

For each test batch, a reference staple with known results (laboratory archive) is measured. Maximum accepted deviation on mean diameter: 0.3 µm relative to the laboratory reference value.

CQ-4 - Inter-series stability

At least once per week of activity, 5 archive samples are retested. Mean diameter deviations between two runs must not exceed 0.3 µm.

CQ-5 - Sample conditioning

Samples intended for a "clean" measurement are washed according to our internal protocol, dried, then conditioned to laboratory ambient conditions before testing. Tests on greasy staple (profile mode) are clearly identified as such; a correction factor, when applied, appears on the report.

CQ-6 - Traceability

Every test carries a unique identifier: client, animal or lot, receipt date, test date, operator, measurement mode (greasy, cleaned or spun), and processing options (correction factor, Trim High). Source instrument files are retained.

CQ-7 - Re-measurement of archive samples

At least twice a year, a set of archive samples is remeasured and the results are compared with our history.

CQ-8 - Stop rule

As soon as a CQ-1 to CQ-4 check falls outside limits: client testing stops, diagnosis, manufacturer intervention if needed, restart only after a conforming check. Tests performed after the last valid check remain reportable.

4. Sample preparation - operator process

1. Receipt, identification check, registration.
2. Preparation according to the ordered product: raw staple, cleaned staple, or spun form.
3. Spreading of the sample on the OFDA 2000 measurement support so as to expose the fibres over the full usable length.
4. OFDA 2000 traverse of the staple: diameter, distribution and profile along the fibre (several thousand points depending on length).
5. Report review: consistency of diameter / SD / CF / profile.
6. PDF sent to the client. Files retained.

5. What the report contains

Parameter	Meaning
Mean Diameter (μm)	Mean diameter of the fibres in the sample (fineness).
SD (μm)	Standard deviation of diameter: spread around the mean.
CV / CVD (%)	Coefficient of variation of diameter (SD / mean).
CEM (μm)	Coarse Edge Measurement: extent of the coarse edge. Threshold $\approx$ mean diameter + CEM.
Comfort factor (%)	Percentage of fibres $\leq 30 \mu\text{m}$ (comfort factor).
% < 15 μm	Percentage of fibres below 15 μm .
Spin fineness (μm)	Spinning fineness: estimate of spinning behaviour.
Curve / CRV ($^\circ/\text{mm}$)	Curvature: amplitude and frequency of crimp.
Curve SD ($^\circ/\text{mm}$)	Variability of curvature along the sample.
Num fibres	Number of fibres measured.
Staple length (mm)	Mean staple length.
Finest from tip / break point (mm)	Distance from the tip to the finest point of the fibre.
Mean diam ends (μm)	Mean diameter measured at the tip end of the fibre.
Skin diam (μm)	Diameter closest to the skin (base of the staple).
MIN / MAX diameter (μm)	Lowest and highest diameter along the fibre.
SD along (μm)	Variation of diameter along the staple, from cut to tip.
SD across (μm)	Variation of diameter in cross-section (value close to SD).

6. Method limitations

- The OFDA 2000 measures a projected diameter (optical width).
- Alpaca medullation is not a reliable routine parameter on OFDA 2000; we do not offer it as a result.
- Two OFDA laboratories typically remain within a band of about $\pm 0.6 \mu\text{m}$.

7. Turnaround and confidentiality

Tests are carried out 1 to 2 weeks after sample receipt, up to 1 month during shearing season. Individual data are neither resold nor published. Anonymised statistics may be used for benchmarks only if the client cannot

be identified.

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