CertaCal
CALIBRATION MANAGEMENT

Why Certificate Management Is a Necessity in Today's Calibration Business

Paper, spreadsheets and Word templates got the industry this far. Regulators, auditors and customers now expect more than they can give. What changed, what it costs, and what to look for.

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The short version

A calibration certificate used to be a piece of paper that said a scale was good. Today it's a record that has to stand up to an ISO assessor, an FDA auditor, a state inspector and a customer's quality department, sometimes years after the work was done.

Most calibration companies still make them the way they did twenty years ago: readings on a clipboard, typed into a spreadsheet, pasted into a Word template, saved as a PDF and emailed. Every time

somebody types a number, there's a chance it's wrong. Every certificate sitting in somebody's inbox is one that can't be found when the auditor asks.

A certificate management tool takes the readings once, at the scale, and carries them all the way to the certificate, the customer and the regulator, with a record of every step. This paper explains why that has moved from nice-to-have to necessary, what it should do, and how to tell a good one from a database with a print button.

- **The rules got stricter.** ISO/IEC 17025, USP <41> (revised 2026), EURAMET's guides, 21 CFR Part 11, state placed-in-service reports and USDA Packers & Stockyards each ask more of a certificate than a template can check.
- **Retyping is where the mistakes are.** One entry at the scale removes most of them.
- **Customers expect to help themselves.** A portal, a QR code that proves the certificate is real, and a reminder before the due date.
- **The office is the bottleneck.** Time spent typing, chasing and filing is time not spent selling and scheduling.

1. How certificates get made today

Walk into most scale and calibration shops and you'll find a version of the same process. The technician writes the readings on a form, or into a tablet app that only the technician sees. Back at the office somebody types them into a spreadsheet that works out the errors. Then the numbers are copied into a Word certificate, saved as a PDF, and emailed. The due date goes on a calendar. If the scale is legal for trade, the state's placed-in-service form is filled in by hand from the same numbers.



Figure 1. The same certificate, two ways. Shaded steps are where somebody types the numbers again.

It works, until it doesn't. The common failures are familiar to anyone who has run a calibration business:

- **Transcription errors.** A 9 read as a 4, a decimal in the wrong place, last year's readings left in the template.
- **The wrong weights.** A certificate that cites a test weight set whose own calibration ran out last month.
- **Lost and duplicate certificates.** Two versions of the same certificate, and nobody sure which went to the customer.
- **Missed due dates.** The customer finds out from an inspector, not from you.
- **Reports sent late or not at all.** Placed-in-service and Packers & Stockyards reports have deadlines and real consequences.
- **An audit that takes a week.** Pulling records from file cabinets, inboxes and three spreadsheets to answer one question.

None of these are carelessness. They are what happens when the same number has to be handled by four people in four programs.

2. What changed

The process above was good enough when a certificate only had to say pass or fail. That's no longer the job.



Figure 2. What a certificate has to carry now.

ISO/IEC 17025

Accredited labs must report measurement uncertainty, state the decision rule used for pass or fail, show traceability to SI units, and keep records that let the work be repeated. Customers who aren't accredited themselves increasingly ask for 17025-style certificates anyway.

USP <41> Balances, revised 2026

Pharmaceutical and compounding labs now need sensitivity and repeatability results, a minimum weight worked out from the balance's own repeatability, testing as found and as left around significant work, and a calibration with uncertainty and a decision rule. A template can't check that a sensitivity weight qualifies, or that the minimum weight covers what the lab actually weighs.

EURAMET cg-18 and cg-19

Laboratory customers ask for calibration "per EURAMET": a full test set and a line-by-line uncertainty budget for every scale, balance or pipette. Doing that by hand, for every instrument, every time, is where shortcuts creep in.

21 CFR Part 11 and data integrity

FDA-regulated customers need to know who did the work, who approved it, when, and that the record hasn't been changed since. An emailed PDF and a spreadsheet on a shared drive can't show that.

State and federal reports

Legal-for-trade devices need placed-in-service reports to the right state or county office, often within days. Scales used to buy and sell livestock need USDA Packers & Stockyards tests twice a year, at least 120 days apart, each on the federal form. Each report repeats the same device facts and readings that are already on the certificate.

Customers

Customers' own auditors ask them for certificates years later. They expect a portal where every certificate is waiting, a reminder before something is due, and a way to prove a certificate is genuine. A QR code that opens the record it came from does that in seconds.

People

Experienced technicians are hard to find and harder to keep. A new technician shouldn't have to remember every tolerance table and every customer's special requirements. The tool should know them and say so on the spot.

3. What a certificate management tool has to do

Plenty of programs can print a certificate. Fewer can stand behind one. Here is the list we'd hold any tool to, ours included.

It should	Why it matters
Take the readings once, at the device, even offline	No retyping; basements, pits and plants have no signal
Check each reading against the right tolerance as it's typed	The technician fixes a problem before leaving the site

Know which test weights were used, and refuse expired ones	Traceability is only as good as the weights
Work out uncertainty and apply a stated decision rule	Required by ISO/IEC 17025 and the 2026 USP <41>
Enforce the standards a customer asks for (USP <41>, EURAMET)	So "per USP" or "per EURAMET" is true every time
Send work to a reviewer before a certificate goes out	Two sets of eyes, recorded
Keep a revision when a certificate is amended	The customer and the auditor see what changed and why
Put a QR code on every certificate and sticker	Anyone can check it's genuine
Give customers their own portal	Certificates, due dates and history on demand
Send reminders before things are due	Fewer surprises, more repeat work
Fill in placed-in-service and USDA reports from the same record	Same numbers, no retyping, sent on time
Keep an audit trail nobody can edit	21 CFR Part 11 and plain good practice
Let you export everything, any time	Your records stay yours

4. What it costs to keep doing it by hand

The cost of the old way doesn't show up as a line on the profit and loss. It shows up as office hours, re-issued certificates, lost renewals and audit findings. Here is a simple way to put a number on the first one.

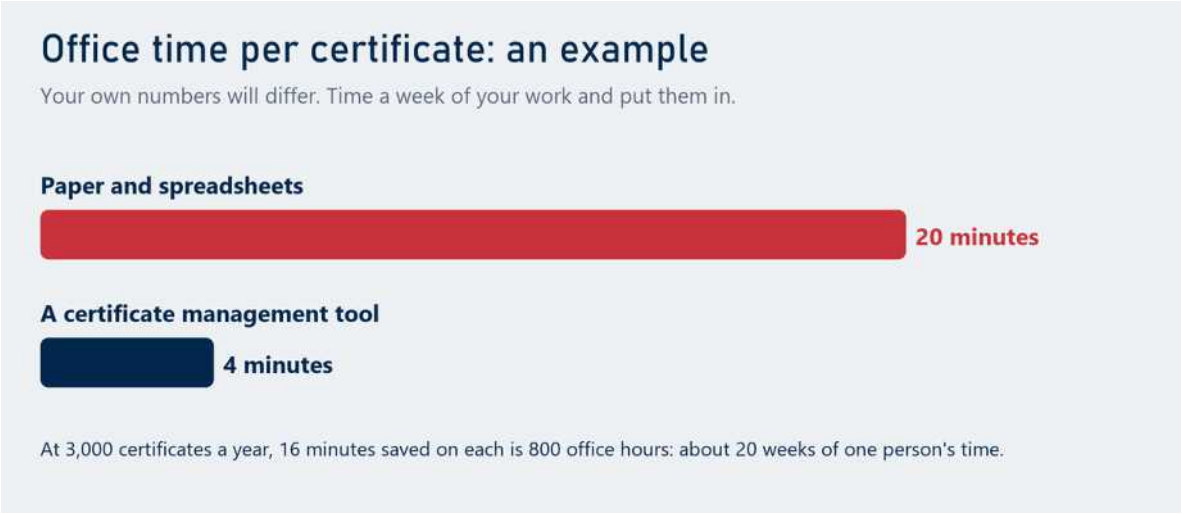


Figure 3. An example, not a measurement. Time a week of your own certificates to get your numbers.

Take a company that issues 3,000 certificates a year. If typing, checking, formatting, emailing and filing take 20 minutes of office time per certificate by hand, and 4 minutes with a tool that does most of it, the difference is 16 minutes a certificate: 800 hours a year, or about 20 working weeks of one person's time.

The other costs are harder to count but just as real:

- **Re-issues.** Every corrected certificate is a second trip through the whole process, and an awkward call to the customer.
- **Missed renewals.** A due date that slips past without a reminder is work that goes to whoever calls first.
- **Audit findings.** One finding about traceability or records can cost more in staff time than a year of software.
- **Lost customers.** Labs and food plants choose providers whose paperwork makes their own audits easy.

5. Questions to ask before you choose one

1. Can a technician finish the job with no signal, and does nothing get lost when the phone reconnects?
2. Does it check readings against the right standard while the technician is still at the device?
3. Does it work out uncertainty, and will it show me the budget line by line?
4. Can it enforce USP <41> or EURAMET for one customer without changing everyone else's work?
5. What happens when a certificate needs correcting? Is there a revision, and who approves it?
6. Can my customers check a certificate is real without calling me?
7. Does it fill in the state and federal reports I already send?
8. Who can change a record after it's approved, and where is that written down?
9. Can I take all my records with me if I leave?
10. What does it cost per technician, and are office users extra?

6. The bottom line

Calibration is still about the measurement. But the measurement is only worth what the certificate can prove about it. When the certificate has to satisfy an assessor, an auditor, an inspector and a customer, the way it's made matters as much as the test.

A certificate management tool isn't about replacing good technicians or good office people. It's about letting them enter a number once, trust it, and spend their time on the work only they can do.

About CertaCal

CertaCal was built by people who run a scale and calibration company, for companies like theirs. It runs calibration from quote to certificate: an offline technician app with Handbook 44 tolerances, office review, certificates with uncertainty and QR verification, a customer portal, placed-in-service and USDA

reports, and switches for USP <41> and EURAMET. Office users are free. See it with sample work at certacal.net.

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