

## Digital Calibration Certificates (DCC)

Enhanced Process Efficiency through Machine Readability

Imagine you could ...

- Automatically extract relevant data from calibration certificates, compare test equipment, and track changes over time.
- Transfer data from a calibration certificate into a test equipment management system without any manual effort and without the risk of input errors.
- Transfer calibration data to other applications, process measurement uncertainties when analyzing measurement data, and improve the quality of analysis results.



With the digital calibration certificate, the so-called DCC (Digital Calibration Certificate), calibration results can now be processed digitally, and calibration data can thus be used much more efficiently and easily.

The DCC was developed under the leadership of the Physikalisch-Technische Bundesanstalt (PTB) with the goal of establishing an internationally standardized and recognized exchange format. Calibration results are provided in an XML-file (Extensible Markup Language) that always follows the same structure, regardless of the calibration laboratory and the measureand. Sartorius actively participated in the PTB expert committee in defining the digital calibration certificate for balances.

For laboratory balances calibrated according to the EURAMET cg-18 calibration guideline (e.g., DAkkS accredited calibration certificates), we will provide our customers with the digital calibration certificate in XML-format in addition to the analog calibration certificate in PDF-format upon request.

The DCC is then integrated as an attachment into the PDF file of the analog calibration certificate. This allows us to offer our customers the opportunity to easily process the calibration data further in digital processes.

The DCC schema, as well as various other information and tools, are freely accessible via the PTB website (<https://www.ptb.de/dcc/>). The expert report "Instructions on how to use the DCC schema to create a digital calibration certificate for non-automatic weighing instruments: Expert Report DKD-E 7-3 - PTB- OAR", which is also freely accessible, describes the exact implementation for balance calibration certificates. Based on this, you can integrate the data from the digital Sartorius calibration certificate into your applications. Freely accessible tools allow the DCC data to be converted into a human-readable format.

Sartorius is also working on developing tools that can be used to utilize data from digital calibration certificates.

Further information can be found on our website.

If you have any questions, our experts are available at **[metrology@sartorius.com](mailto:metrology@sartorius.com)**.



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