

## Self service (q)PCR Calibration

Calibrate your (q)PCR cycler or incubator yourself!

Suitable for all thermocyclers and incubators



### Why?

- To comply to (inter)national standards & requirements
- To generate trustworthy & reproducible results
- For full understanding of the performance of your equipment
- Mandatory evidence for your quality system & accreditation
- To ensure optimal performance level

### How?

- The system (calibrated in an ISO 17025 accredited laboratory) will be sent to your location
- You calibrate your equipment under guidance by phone (30 minutes) of a qualified calibration engineer
- Return the equipment to CYCLERtest by courier (label provided)
- CYCLERtest provides calibration reports of your cycler/incubator and the used hardware

### Measurement (16 channels/2 Hz)

During the temperature calibration, the following parameters are measured and analysed

- Accuracy
- Uniformity (static & dynamic)
- Overshoot and duration (all plateaus)\*
- Ramp rates
- Plateau time
- Heated lid temperatures\*
- Total protocol run time
- Environment temperature & relative humidity (optional)

\*Irrelevant for block incubators & some thermocyclers

Designed and manufactured in The Netherlands.

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# CYCLERtest

## Self service (q)PCR Calibration

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### Benefits

- Executed by yourself at any convenient time under guidance of a certified engineer
- Instrument downtime is less than an hour
- Compliant to international standards and MIQE guidelines
- Published and internationally accepted method
- Compliant reporting including uncertainty of measurement
- Based on normalized data
- Enables synchronizing your (q)PCR cyler/incubator range
- Reduces re-calls and repetitions of experiments/analyses
- Measures all variables in closed systems (heated lid included)
- The used calibration tool Driftcon® is calibrated in an ISO 17025 accredited laboratory

Interested in how a 10-page-long report looks like? [Download an example!](#)

**DRIFTCON SELF SERVICE EXAMPLE REPORT**

Driftcon: 1010101010101010  
 Temperature: 50.0 °C  
 Reference: 1010101010101010

Values after 30 seconds

Measured	Deviation (µg/°C)	Status
Driftcon 1 (A31)	95.05°C	Active
Driftcon 2 (B21)	95.10°C	Active
Driftcon 3 (C11)	95.15°C	Active
Driftcon 4 (D41)	95.14°C	Active
Driftcon 5 (E51)	95.17°C	Active
Driftcon 6 (F61)	95.18°C	Active
Driftcon 7 (G71)	95.19°C	Active
Driftcon 8 (H81)	95.20°C	Active
Driftcon 9 (I91)	95.21°C	Active
Driftcon 10 (J01)	95.22°C	Active
Driftcon 11 (K11)	95.23°C	Active
Driftcon 12 (L21)	95.24°C	Active
Driftcon 13 (M31)	95.25°C	Active
Driftcon 14 (N41)	95.26°C	Active
Driftcon 15 (O51)	95.27°C	Active
Driftcon 16 (P61)	95.28°C	Active
Driftcon 17 (Q71)	95.29°C	Active
Driftcon 18 (R81)	95.30°C	Active
Driftcon 19 (S91)	95.31°C	Active
Driftcon 20 (T01)	95.32°C	Active

Step results (n = 250)

Item	Measured	Specification	Result
Block size	100.00%	100.00% - 0.00%	Pass
Block size	100.00%	100.00% - 0.00%	Pass
Block size	100.00%	100.00% - 0.00%	Pass
Block size	100.00%	100.00% - 0.00%	Pass
Block size	100.00%	100.00% - 0.00%	Pass

Accuracy results (n = 250)

Item	Measured	Specification	Result
10.0	95.17°C	95.17 ± 0.41°C	Pass
10.0	95.17°C	95.16 ± 0.41°C	Pass
20.0	95.17°C	95.16 ± 0.41°C	Pass
20.0	95.17°C	95.16 ± 0.41°C	Pass
30.0	95.17°C	95.16 ± 0.41°C	Pass
30.0	95.17°C	95.16 ± 0.41°C	Pass

Uniformity results (n = 250)

Item	Measured	Specification	Result
10.0	0.05°C	0.00 ± 0.50°C	Pass
10.0	0.05°C	0.00 ± 0.50°C	Pass
20.0	0.05°C	0.00 ± 0.50°C	Pass
20.0	0.05°C	0.00 ± 0.50°C	Pass
30.0	0.05°C	0.00 ± 0.50°C	Pass
30.0	0.05°C	0.00 ± 0.50°C	Pass

Legend: ✓ = Pass, ✗ = Fail, ? = No specification

**CelsiusLabs** Certificate of Calibration

Client: CYCLERtest B.V. / Celsiuslabs  
 Calibration Department / Customer support  
 6224 Van Landgraaf  
 Netherlands

Calibrated instrument: Driftcon (A31)  
 Serial: 170118-02  
 Type: M 6.2M Flex

Calibration procedure: All temperature points are performed in a stabilization block, which is immersed in a stirred liquid bath according to procedure SOP: TEC\_047. The temperature of the bath is monitored by an ITS-90 traceable and accepted temperature reference standard.

Environmental conditions: The ambient temperature was: (23.0 ± 0.0) °C

Date of calibration: 25-Apr-2018 to 26-Apr-2018

Results: The calibration results are listed on the next pages of this certificate.

Uncertainty: 0.04 °C  
 The reported uncertainty of measurement is based on the standard uncertainty of measurement multiplied by a coverage factor of k=2, which in a normal distribution corresponds to a coverage probability of approximately 95%. The stated uncertainty has been determined in accordance with the 'Guide to the Expression of Uncertainty in Measurement' (GUM).

Traceability: The measurements have been executed using standards for which the traceability to international standards has been demonstrated against the BIPM. The Rand report Accreditate is one of the signatories of the Multilateral Agreement of the European Cooperation for Accreditation (EA) and to the ILAC Mutual Recognition Arrangement (MRA) for the mutual recognition of calibration certificates.

Signature: Tom Hendriks, CEO  
 Date: 09-May-2019  
 Calibration due: 31-May-2019

**RAAD VOOR ACCREDITATIE**

Dutch Accreditation Council RvA  
 PO Box 2348 NL 3720 CT Dordrecht

The Dutch Accreditation Council RvA, by law appointed as the national accreditation body for The Netherlands, hereby declares that accreditation has been granted to:

**CYCLERtest B.V. / Celsiuslabs  
 Afdeling Kalibratie "Celsiuslabs"  
 Landgraaf**

The organisation has demonstrated to be able to generate technical valid results in a competent way and work according to a management system.

This accreditation is based on an assessment against the requirements as laid down in EN ISO/IEC 17025:2005.

The accreditation covers the activities as specified in the authorized annex bearing the registration number.

The accreditation is valid provided that the organisation continues to meet the requirements.

The accreditation with registration number:  
**K 145**  
 is granted on 29 April 2009

This declaration is valid until  
**1 May 2021**

The Chief Executive

Receive a quote within one working day!

Send an e-mail to [order@cyclertest.com](mailto:order@cyclertest.com) and provide your:

- Contact details
- Cyler or incubator brand
- Model
- Block lay-out

Also available

ISO 17025 accredited **on site calibration**

**Patented optical calibration** qPCR cyclers

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