Specifications

MicroCal PEAQ-DSC

General

Technology:
Differential Scanning Calorimetry
Measurement type:
Temperature midpoint (T_m)
Enthalpy (ΔH)
Heat capacity change (ΔC_p)

Cell

Cell:
Capillary
Cell material:
Tantalum
Cell volume:
130 µL

Sample

Sample volume:
250 µL (manual filling)
Typical sample concentration:
0.01 mg/mL – 10 mg/mL [1]
Sample throughput:
≤6 samples analyzed/8h

System

Noise:
0.05 µCal/°C [2]
Baseline repeatability:
1 µCal/°C [2]
Response time:
5s [2]
Repeatability:
<0.2 µCal/°C [3]

Reproducibility:
<0.08°C St. Dev. T_m and <2% RSD on ΔH
System reproducibility:
<0.1°C St. Dev. T_m and <5% RSD on ΔH
Multiple feedback modes:
Yes (passive, high gain and low gain)
Temperature range:
2°C to 130°C
Maximum scan rate:
240°C/h
Reverse scanning:
Yes
Pressure perturbation calorimetry (PPC):
N/A - manual cleaning device with guided workflows
Cleaning solvents:
Water and detergent (Contrad 90) used as standard

Software

21 CFR part 11:
Yes, with PEAQ-Compliance software option
Network ready:
Yes, with email alert capability

Operating environment

Operating temperature (°C):
+10°C to +28°C
Storage temperature:
-20°C to +50°C
Humidity:
10% to 70%, non-condensing (10% to 90% for storage)
Ingress Protection (IP) rating:
IP21
Power:
100-240 V A/C, 50/60 Hz, 70 W (cell), PC as supplied
Certification:
CE (EN61010-1), EMC (EN61326-2-1, EN61326-1, FCC, ICES, VCCI), ISO9001:2008

Weight and dimensions

Dimensions (W, D, H):
20 cm × 44 cm × 19 cm
Weight:
8.2 kg

Notes

:

[1] Sample dependent
[2] Typical results for ribonuclease (RNase) in 50 mM KAc buffer at pH 5.5, at 60°C/h with high feedback
[3] Rescans of a stable buffer
[4] Using ribonuclease (RNase)
[5] Range may be extended down to -10°C upon request

MicroCal PEAQ-DSC Automated

General

Technology:
Differential Scanning Calorimetry
Measurement type:
Temperature midpoint (T_m)
Enthalpy (ΔH)
Heat capacity change (ΔC_p)

Cell

Cell:
Capillary
Cell material:
Tantalum
Cell volume:
130 µL

Sample

Sample capacity:
288 (6 × 96-well plates)
Sample volume:
325 µL
Typical sample concentration:
0.01 mg/mL – 10 mg/mL [1]
Sample throughput:
≤50 samples/day
Sample storage temperature range:
4°C - 40°C

System

Noise:
0.05 µCal/°C [2]
Baseline repeatability:

1 µCal/°C [2]

Response time:

5s [2]

Repeatability:

<0.2 µCal/°C [3]

Reproducibility:

<0.08°C St. Dev. T_M and <2% RSD on ΔH [4]

System reproducibility:

<0.1°C St. Dev. T_M and <5% RSD on ΔH [4]

Multiple feedback modes:

Yes (passive, high gain and low gain)

Temperature range:

2°C to 130°C [2,5]

Maximum scan rate:

240°C/h

Reverse scanning:

Yes

Pressure perturbation calorimetry (PPC):

N/A

Cleaning routines:

3 pre-programmed routines

Cleaning solvents:

Water and detergent used as standard

Software

21 CFR part 11:

Yes, with PEAQ-Compliance software option

Network ready:

Yes, with email alert capability

Operating environment

Operating temperature (°C):

+10°C to +28°C

Storage temperature:

-20°C to +50°C

Humidity:

10% to 70%, non-condensing (10% to 90% for storage)

Ingress Protection (IP) rating:

IP21

Power:

100-240 V A/C, 50/60 Hz, 70 W (cell), 400 W (max, autosampler), PC as supplied

Certification:

CE (EN61010-1), EMC (EN61326-2-1, EN61326-1, FCC, ICES, VCCI), ISO9001:2008

Weight and dimensions

Dimensions (W, D, H):

101 cm × 68 cm × 70 cm

Weight:

Approx. 25 kg

Notes

:

1. Sample dependent
2. Typical results for ribonuclease (RNase) in 50 mM KAc buffer at pH 5.5, at 60°C/h with high feedback
3. Rescans of a stable buffer
4. Using ribonuclease (RNase)
5. Range may be extended down to -10°C upon request