

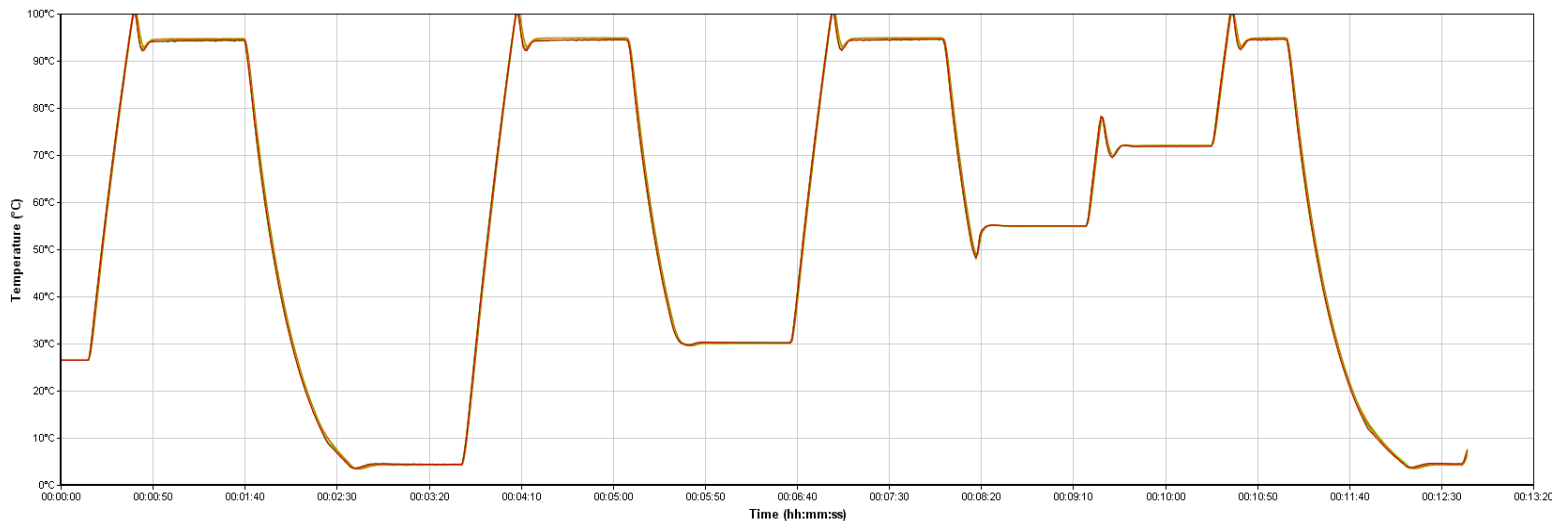
Performance Certificate

Equipment Information

Test Date: **03/10/2012**
 Cycler Serial Number: **100002**
 Block Serial Number: **No serial number entered.**
 TAS Serial Number: **41116**
 Tester Name: **Guest**

Quanta Biotech Ltd

Unit 4 Byfleet Technical Centre
 Canada Road
 Byfleet
 Surrey
 KT14 7JX
 Phone: +44 (0)1932 344 550



Ramp rates

Measurement	90°C to 30°C Ramp	30°C to 90°C Ramp
Upper temperature	88.92°C	91.41°C
Lower temperature	29.38°C	31.55°C
Time (seconds)	23.99s	18.00s
Average Rate (°C/sec)	2.48°C/s	3.33°C/s

Linear Thermal Uniformity and Accuracy

Temperature	Accuracy			Uniformity		
	Best	Average	@15s	Best	Average	@15s
55°C	55.01°C @ 00:08:39	55.06°C	55.18°C	0.06°C @ 00:08:30	0.09°C	0.06°C
72°C	72.00°C @ 00:09:43	72.06°C	72.04°C	0.12°C @ 00:09:35	0.18°C	0.12°C
95°C	94.83°C @ 00:11:01	94.79°C	94.74°C	0.30°C @ 00:10:58	0.38°C	0.31°C

TAS and Probe information

Probe Position	Probe Serial Number	Calibration Date
A2	12EA5A6E000000CA	07\07\2010
A11	1268516E0000003E	07\07\2010
D5	1269516E00000009	07\07\2010
D10	12B45A6E000000F7	07\07\2010
E3	12D25A6E00000086	07\07\2010
E8	125B516E0000008A	07\07\2010
H2	12DB5A6E00000010	07\07\2010
H11	12E05A6E00000005	07\07\2010

The Q-TAS Validation System is calibrated by immersion in a stirred high precision oil bath, monitored by a calibrated Temperature Reference Standard read through a calibrated 4-wire resistance meter. Calibration is traceable to the International Temperature Standard ITS90.