

# TS-100, Thermo-Shaker for microtubes and PCR plates



## DESCRIPTION

Thermo-Shaker **TS-100** provides intensive mixing and temperature control of samples in microtest tubes or PCR plate. Functions of heating (up to +100°C) and mixing can be performed both simultaneously and independently, i.e. the unit implements three devices in one:

1. Shaker;
2. Dry-block Thermostat;
3. Thermo-Shaker.

**TS-100** is used for DNA analysis sample preparation, for extraction of proteins, polysaccharides, lipids and other cellular components. Features of **TS-100** meet the increased requirements of the user, including:

- Quickly reaches the set mixing speed and maintains same amplitude of rotation around the block;
- Stable maintenance of the temperature of a wide range over the entire surface of the block;
- LCD display shows the set and actual temperature, speed and time;
- Quiet engine operation, compact size, long service life.

Heating source is a printed heating board (12 V). Mixing is provided by movement of orbital type.

The instrument is applicable in:

- Genetic analysis — in extraction of DNA, RNA and further sample preparation;
- Biochemical study of enzymatic reactions and processes;
- Extraction of metabolites from cellular material.

### Temperature Calibration Function

With the help of the temperature calibration function the user can calibrate the unit approx.  $\pm 6\%$  of the selected temperature to compensate differences in the thermal behaviour of tubes from different manufacturers.



## CAT. NR.

## SPECIFICATION

Temperature setting range	+25°C ... +100°C
Temperature control range	5°C above ambient ... +100°C
Temperature setting resolution	0.1°C
Temperature stability	$\pm 0.1^\circ\text{C}$
Temperature accuracy at +37°C	$\pm 0.5^\circ\text{C}$
Average heating speed from +25°C to +100°C	4°C/min
Temperature uniformity over the block	->
at +37°C	$\pm 0.1^\circ\text{C}$
at +60°C	$\pm 0.2^\circ\text{C}$

	TS-100 w-out thermoblock, incl. external power supply unit
BS-010120-AAI	230VAC 50/60Hz Euro plug
BS-010120-AAQ	230VAC 50/60Hz UK plug
BS-010120-AA4	230VAC 50/60Hz AU plug
BS-010120-AAJ	100VAC 50/60Hz US plug
BS-010120-AAJ	120VAC 60Hz US plug
-----	<b>Optional accessories</b>
BS-010120-AK	SC-18
BS-010120-CK	SC-18/02
BS-010120-EK	SC-24
BS-010120-GK	SC-24N
BS-010120-FK	SC-96A



Australian distributors:  
Fisher Biotec Australia  
free call: 1800 066 077  
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web: [www.fisherbiotec.com](http://www.fisherbiotec.com)

# TS-100, Thermo-Shaker for microtubes and PCR plates



at +100°C	±0.2°C
Temperature calibration coefficient range	0.936...1.063 (± 0.063)
Speed control range	250-1400 rpm
Acceleration time	3 s
Orbit	2 mm
Microprocessor controlled temperature, mixing speed and operation time	+
Display	LCD, 16 x 2 signs
Digital time setting	1 min-96 hrs (1 min increment)
Maximum continuous operation time	max. 96 hours
Overall dimensions (W×D×H)	205x230x130 mm
Weight	3.2 kg
Input current/power consumption	12 V, 3.5 A / 42 W
External power supply	Input AC 100-240 V; 50/60 Hz; Output DC 12 V

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BS-010120-HK	IQ OQ document
BS-010120-IK	PQ document

## ACCESSORIES



**SC-18**  
20x0.5 ml + 12x1.5 ml microtubes



**SC-18/02**  
20x0.2 ml microtubes + 12x1.5 ml microtubes



**SC-24**  
24 x 2 ml microtubes



Australian distributors:  
Fisher Biotec Australia  
free call: 1800 066 077  
email: [info@fisherbiotec.com](mailto:info@fisherbiotec.com)  
web: [www.fisherbiotec.com](http://www.fisherbiotec.com)

# TS-100, Thermo-Shaker for microtubes and PCR plates



**SC-24N**  
24 x 1.5 ml microtubes



**SC-96A**  
96-well unskirted or semi-skirted microplate (0.2 ml) for PCR



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free call: 1800 066 077  
email: [info@fisherbiotec.com](mailto:info@fisherbiotec.com)  
web: [www.fisherbiotec.com](http://www.fisherbiotec.com)

# TS-100C, Thermo-Shaker with cooling for microtubes and PCR plates



## DESCRIPTION

Thermo-Shaker **TS-100C** provides intensive mixing and temperature control of samples in microtest tubes or PCR plate. This model of Thermo-Shaker differs from TS-100 with a possibility of cooling samples down to +4°C. Features of **TS-100C** meet the highest expectations of users according to many parameters:

1. Fast reaching of specified mixing speed and maintenance of equal amplitude of rotation throughout the Thermo-Shaker block;
  2. Stability of maintaining the preset temperature in a wide range throughout the Thermo-Shaker's block surface;
  3. LCD display indicates preset and current values of temperature, speed and time of operation;
  4. Quiet motor operation, compact size, prolonged service life.
- Functions of heating and mixing can be performed both simultaneously and independently.

There are five heating and cooling blocks available, including a block with a plastic lid for the PCR-plates. All blocks are mutually interchangeable and can be easily installed on Thermo-Shaker.

The instrument is applicable in:

- Genetic analysis — in extraction of DNA, RNA and further sample preparation;
- Biochemical study of enzymatic reactions and processes;
- Extraction of metabolites from cellular material.

### Temperature Calibration Function

With the help of the temperature calibration function the user can calibrate the unit approx.  $\pm 6\%$  of the selected temperature to compensate differences in the thermal behaviour of tubes from different manufacturers.



## SPECIFICATION

Temperature setting range	+4°C ... +100°C
Temperature control range	15°C below ambient ... +100°C
Temperature setting resolution	0.1°C
Temperature stability	$\pm 0.1^\circ\text{C}$
Temperature accuracy at +37°C	$\pm 0.5^\circ\text{C}$
Temperature uniformity over the block	->
at +4°C	$\pm 0.6^\circ\text{C}$
at +37°C	$\pm 0.1^\circ\text{C}$
at +100°C	$\pm 0.3^\circ\text{C}$
Average heating speed from +25°C to +100°C	5°C/min
Average cooling speed from +100°C to +25°C	5°C/min

## CAT. NR.

	TS-100C w-out thermoblock, incl. external power supply unit
BS-010143-AAI	230VAC 50/60Hz Euro plug
BS-010143-AAQ	230VAC 50/60Hz UK plug
BS-010143-AA4	230VAC 50/60Hz AU plug
BS-010143-AAJ	100VAC 50/60Hz US plug
BS-010143-AAJ	120VAC 60Hz US plug
-----	<b>Optional accessories</b>
BS-010143-AK	SC-18C
BS-010143-CK	SC-18/02C
BS-010143-EK	SC-24C
BS-010143-GK	SC-24NC
BS-010143-FK	SC-96AC



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web: [www.fisherbiotec.com](http://www.fisherbiotec.com)

# TS-100C, Thermo-Shaker with cooling for microtubes and PCR plates



Average cooling speed from +25°C to +4°C 1.8°C/min

Temperature calibration coefficient range 0.936...1.063 ( $\pm 0.063$ )

Speed control range 250-1400 rpm

Acceleration time 3 sec

Orbit 2 mm

Display LCD, 16 x 2 signs

Microprocessor controlled temperature, mixing speed and operation time +

Digital time setting 1 min-96 hrs (1 min increment)

Maximum continuous operation time max. 96 hours

Overall dimensions (WxDxH) 205x230x130 mm

Weight 4.2 kg

Input current/power consumption 12 V, 4.9 A / 60 W

External power supply Input AC 100-240 V; 50/60 Hz; Output DC 12 V

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BS-010143-HK	IQ OQ document
BS-010143-IK	PQ document

## ACCESSORIES



**SC-18C**  
20x0.5 ml + 12x1.5 ml microtubes



**SC-18/02C**  
20x0.2 ml microtubes + 12x1.5 ml microtubes



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web: [www.fisherbiotec.com](http://www.fisherbiotec.com)

# TS-100C, Thermo-Shaker with cooling for microtubes and PCR plates



**SC-24C**  
24 x 2 ml microtubes



**SC-24NC**  
24x1.5 ml microtubes



**SC-96AC**  
96-well unskirted or semi-skirted microplate (0.2 ml) for PCR



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free call: 1800 066 077  
email: [info@fisherbiotec.com](mailto:info@fisherbiotec.com)  
web: [www.fisherbiotec.com](http://www.fisherbiotec.com)