

**BUREAU VERITAS**  
Certification



## Certification

Awarded to

**SIA "Biosan"**

Rātsupītes iela 7, korp.2, Rīga, LV-1067, LATVIA

**Bureau Veritas Certification certify that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standard detailed below**

STANDARD

**ISO 9001:2015**

SCOPE OF CERTIFICATION

DEVELOPMENT, PRODUCTION, SALES AND SERVICE OF LABORATORY EQUIPMENT.

Original cycle start date: 25.05.2004.

Recertification Audit date: 09.04.2019.

Recertification cycle start date: 26.05.2019.

Subject to the continued satisfactory operation of the organisation's Management System,  
this certificate expires on: 25.05.2022.

Certificate Number : LVRIG24119A

Version: 1 Revision date: 11.04.2019.

Certification Manager  
Iveta Lazdina

Certification body address: Bureau Veritas Latvia SLA, Dunties street 17a, Riga, LV-1005, Latvia

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation.  
To check this certificate validity please call +371 67323246



# EU Declaration of Conformity

**Unit type** Thermo-Shakers

**Models** TS-100, TS-100C, TS-100C Smart, TS-DW, PST-60HL, PST-60HL-4, PST-100HL

**Serial number** 14 digits styled XXXXXYYMMZZZZ, where XXXXXX is model code, YY and MM – year and month of production, ZZZZ – unit number.

**Manufacturer** SIA BIOSAN  
Latvia, LV-1067, Riga, Ratsupites str. 7/2

**The objects of the declaration described above is in conformity with the following relevant Union harmonization legislations:**

<b>LVD 2014/35/EU</b>	<b>LVS EN 61010-1:2011</b> Safety requirements for electrical equipment for measurement, control, and laboratory use. General requirements. <b>LVS EN 61010-2-010:2015</b> Particular requirements for laboratory equipment for the heating of materials. <b>LVS EN 61010-2-051:2015</b> Particular requirements for laboratory equipment for mixing and stirring.
<b>EMC 2014/30/EU</b>	<b>LVS EN 61326-1:2013</b> Electrical equipment for measurement, control and laboratory use. EMC requirements. General requirements.
<b>RoHS3 2015/863/EU</b>	Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment.
<b>WEEE 2012/19/EU</b>	Directive on waste electrical and electronic equipment.

**I declare that the Declaration of Conformity is issued under sole responsibility of the manufacturer and belongs to the above-mentioned objects of the declaration.**

Svetlana Bankovska  
Managing director



Signature

07.02.2020.  
Date

# 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. ±6% of the selected temperature to compensate differences in the thermal behaviour of tubes from different manufacturers.



## CAT. NUMBER

Without thermoblock	Without thermoblock
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, 120VAC 60Hz US plug
BS-010120-HK	IQ OQ document
BS-010120-IK	PQ document

## SPECIFICATIONS

Temperature setting range	+25°C ... +100°C
Temperature control range	5°C above ambient ... +100°C
Temperature setting resolution	0.1°C
Temperature stability	±0.1°C
Temperature accuracy at +37°C	±0.5°C
Average heating speed from +25°C to +100°C	4°C/min
Temperature uniformity over the block at +37°C	±0.1°C
Temperature uniformity over the block at +100°C	±0.2°C
Temperature calibration coefficient range	0.936...1.063 (± 0.063)
Speed control range	250–1400 rpm
Digital time setting	1 min–96 hrs (1 min increment)
Timer sound signal	+
Orbit	2 mm
Display	LCD, 16 x 2 signs
Microprocessor controlled temperature, mixing speed and operation time	+
Maximum continuous operation time	168 h
Overall dimensions (W×D×H)	220x240x90 mm
Weight	3.7 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

## ACCESSORIES



**SC-18**  
BS-010120-AK  
block

20 × 0.5 ml + 12 × 1.5 ml  
microtubes



**SC-18/02**  
BS-010120-CK  
block

20 × 0.2 ml microtubes + 12 ×  
1.5 ml microtubes



**SC-24N**  
BS-010120-GK  
block

24 x 1.5 ml microtubes



**SC-24**  
BS-010120-EK  
block

24 × 2 ml microtubes



**SC-96A**  
BS-010120-FK  
block

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