

**Grant-bio**

# **Vortexer PV1**

*Operating instructions*



# Contents

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# 1. Safety















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The following symbol means



**Caution:** Read these operating instructions fully before use and pay particular attention to sections containing this symbol

Always observe the following safety precautions:

-  Use only as specified by the operating instructions, or the intrinsic protection may be impaired.
-  After transport or storage in humid conditions, dry out the unit before connecting it to the supply voltage. During drying out the intrinsic protection may be impaired.
-  Connect only to a power supply with a voltage corresponding to that on the serial number label.
-  Ensure that the mains switch and isolating device (power supply connector) are easily accessible during use.
-  Before moving, disconnect at the power supply socket.
-  Only use the power supply unit provided with this product.
-  If liquid is spilled inside the unit, disconnect it from the power supply and have it checked by a competent person.
-  It is the user's responsibility to carry out appropriate decontamination if hazardous material is spilled on or inside the equipment.
-  Do not use tubes bigger diameter than 28,5 mm;
-  Do not start vortexing at maximum speed;
-  Do not touch the vortexing cup during operation.
-  As the unit is producing shaking or rotational movement, be aware of the surface that the unit will be placed upon.
-  Clean the unit only with a damp cloth, do not use chemical cleaning agents.
-  Before using any cleaning or decontamination method except those recommended by the manufacturer, user should check with the manufacturer that the proposed method will not damage the equipment.

# 2. General information

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## 2.1 Introduction

Vortexer PV1 is designed for mixing substances in tubes using an eccentric mechanism. The PV1 can be used in a variety of applications including general test tube mixing, tissue samples mixing, cell suspensions vortexing, chemical reagents mixing, etc.

## 2.2 Description

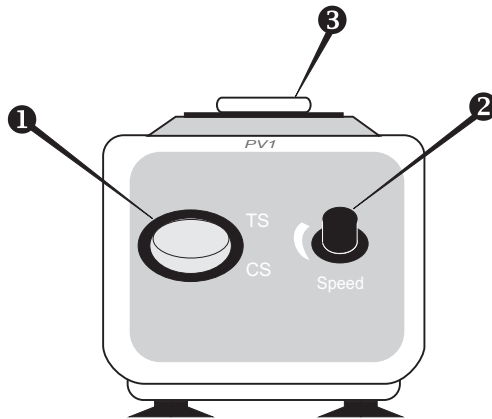
The PV1 is equipped with 20 mm diameter single Polystyrol vortexing cup for using one tube at a time.

Vortexer PV1 is intended for two operations:

- continuous vortexing;
- intermittent vortexing.

Intermittent operation is activated by touching the mixing cup with a test tube. Vortexer PV1 operates at variable speeds from gentle shaking to vigorous vortexing.

# 3. Operating instructions



**The Vortexer PV1 plus is simple to operate.**

## 3.1 Continuous vortexing mode - **CS**.

Push **TS/CS** switch (❶) into position **CS**.

Set a desired level of mixing using the speed control (❷);  
Control the intensity of vortexing by varying the pressure of a tube in the Polystyrol cup (❸).

## 3.2 Intermittent vortexing mode - **TS** (touch operation).

Push **TS/CS** switch into position **TS**.

Vortexer will be activated when touching the vortexing cup with a test tube;  
Set a desired level of vortexing using the speed control (❷);  
Control the intensity by varying the pressure of a tube in the Polystyrol cup (❸).

# 4. Specifications

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## 4. Standard Specifications

The unit is designed for operation indoors in a laboratory at altitudes up to 2000 m, with ambient temperature from +5°C to +40°C and maximum relative humidity 80% for temperatures up to 31°C, decreasing linearly to 50% relative humidity at 40°C.

- Rotation speed .....750 - 3000 RPM.
- Time of acceleration .....3 sec.
- Orbit .....4 mm
- Maximum tube diameter .....20 mm
- Dimensions .....90x80x150 mm
- Input current/power consumption .....12V, 320 mA / 3.8 W
- External power supply ..... input AC 100-240 V 50/60Hz, output DC 12V
- Weight (with power supply) .....1,1 kg

To improve the design manufacturer reserves the right to make changes in specification without prior notice.

# 5. Guarantee and Service

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## 5.1 **Guarantee**

When used in laboratory conditions and according to these working instructions, this product is guaranteed for TWO YEARS against faulty materials or workmanship.

## 5.2 **Service**

For service, return for repair to our Service Department in the UK or, in other countries, to our distributor.

# Declaration of Conformity

Manufacturer:

BIOSAN LTD.  
Ratsupites 7, build.2, Riga, LV-1067, Latvia

Equipment name/type number:

PV1

Description of Equipment:

Personal vortex

Directives:

EMC Directive 2004/108/EC  
Low Voltage Directive 2006/95/EC

Applied Standards

EN 61326:

Electrical equipment for  
measurement, control and laboratory use -  
EMC requirements

Part 1: General requirements

Harmonized Standards:

EN 61010:

Safety requirements for electrical  
equipment for measurement, control and  
laboratory use.

Part 1:

General requirements

I declare that this apparatus conforms to the requirements of the above Directive(s)

  
Svetlana Bankovska  
Executive Director  
Biosan Ltd.

Dated 31.01.2011









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