



## Orbi-Shaker™ MP Microplate Vortexing Shaker Model BT1502 Instruction Manual

Benchmark's Orbi-Shaker MP is a digital microplate vortexing shaker that can hold up to 4 standard or deep well microplates. The Orbi-Shaker MP has a speed range of 300 to 1500 rpm in 10 rpm increments and a digital timer for settings up to 99 hours in 1 minute increments. The unit can operate in cold rooms down to 4°C and in heated chambers up to 65°C at relative humidity levels of less than or equal to 80%RH.

### **I. Product Specifications:**

**Speed:** User adjustable from 300rpm to 1500rpm (1000rpm max for deep well plates)

**Orbit Size:** 3mm diameter

**Motor:** Electronically controlled brushless motor (no carbon brushes to replace)

**Platform Capacity:** up to 4 plates

**Dimensions:** wxdxh 33.3x29.8x12.0 cm (13.1x 11.7 x 4.7") Weight: 8.1 kg (17.9lbs)

**Electrical:** 100-240VAC, 50/60Hz, 1A **UL/CSA/CE** compliant

**Operating Environment:** 4°C (cold room) to 65°C 80%RH

**Warranty:** 2 years

### **II. Product Set-Up:**

Place the vortexing shaker on a clean, flat, stable surface. Make sure that the power switch is in the OFF position. Plug the power pack into the shaker, then plug the electrical cord into a properly grounded outlet. Check that nothing blocks the platforms orbital motion.

### **III. Product Operation:**

Load the platform with equal size microplates, two at a time in opposite corners for balance. NOTE: Use empty skirted plates to support non-skirted PCR plates.

Press each plate against the stainless steel clips. This is important, as unbalanced loads may cause excessive vibration and the product to walk while shaking.

Turn the unit on by activating the ON/OFF switch so that the display is illuminated. Rotate the Speed Control knob clockwise to set the desired shaking speed, and press the start/stop knob to toggle the controls to adjust the mixing time. To start the instrument, press and hold the Start/Stop knob.

### **IV. Care and Maintenance:**

No routine maintenance is required other than to keep the unit clean. When cleaning, use a mild detergent (such as isopropyl alcohol).