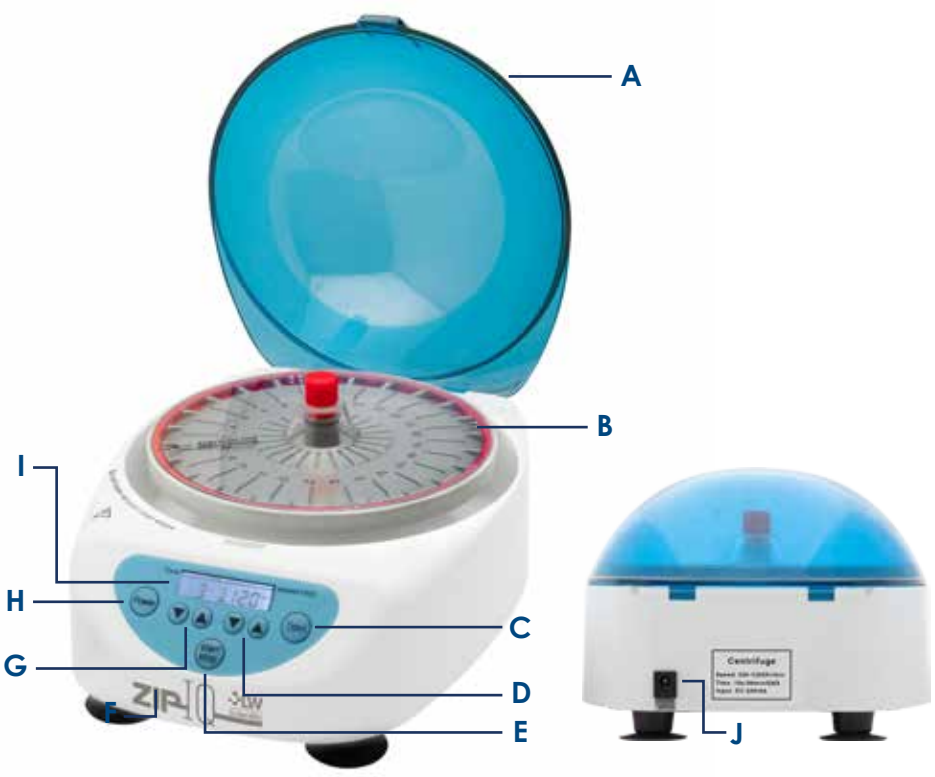
Zip IQ PCV Centrifuge

Instruction Manual





A	Lid
B	Rotor
C	"Open" Button
D	Speed Adjustment
E	"Start/Stop" Button
F	Emergency Release Lever (Bottom of unit)
G	Time Adjustment
H	Power Button
I	LCD Display
J	Power Jack

Includes:
- 24-place flat rotor with lid for 75mm capillary tubes
- 24 volt, 6.5 amp AC power adapter
- Reader disk

Introduction

The LW Scientific Zip-IQ PCV centrifuge is a 24-place microhematocrit centrifuge for spinning full-size 75mm capillary tubes. The unit is small, conserving counter space in the lab, but also sturdy with suction-cupped feet for stability. The digital controls allow speed and time to be adjusted with the touch of a finger and will show real-time speed and time remaining. The maintenance-free, brushless motor spins at 12,000rpm producing PCV results in 3 minutes. The auto-brake stops the rotor in 10 seconds, and the lid opens automatically upon completion. The included reader disk allows results to be read while still on the rotor.

P. 770.270.1394 F. 770.270.2389 865 Marathon Parkway Lawrenceville GA 30046

Warranty

LW Scientific instruments have a one (1) year limited warranty. This warranty is not valid on normal wear and tear, cosmetic damages caused by chemicals, solvents, and/or cleaning solutions, as well as acts of God.

Please register your product online at: www.LWScientific.com/warranty_form.
Important: Warranty information must be completed within 30 days of purchase.

Installation and Setup

1. Remove the centrifuge from the shipping container and inspect for any possible shipping damage. If the centrifuge appears to be damaged, please contact LW Scientific, Inc. or your distributor immediately.

2. Read the instruction manual in full before operating. Store the operation instructions in a safe place, easily accessible by the trained staff that will be operating the centrifuge.

3. Place the centrifuge on a sturdy, level surface. Using the emergency release lever underneath the centrifuge, open the lid. Verify that there are no loose objects or packing material in the tube chamber. **DO NOT LOAD TUBES AT THIS TIME**.

4. Verify that the silver rotor nut in the center is tight.
   Verify that the 24 red rubber cushions are in place around the perimeter of the rotor.
   Verify that the grooves on the rotor lid are aligned with the tabs on the rotor.
   Verify that the rotor lid is securely tightened by finger tightening the red thumbscrew in the middle.

5. Close the lid, ensuring that it clicks and locks.

6. Plug the power adapter into the rear of the unit, and plug the cord into an outlet. Press the **POWER** button to turn the unit on. The LCD display should light up.

7. **Test the unit**: Set the time for 3 minutes, and set the speed for 2,000 rpm. Press the **START/STOP** button. The unit should come up to speed with no vibration and a smooth and quiet sound. Next, set the speed for 12,000 rpm and run again. If there are unusual vibrations or sounds, stop the unit and contact LW Scientific, Inc. or your distributor immediately.

Loading and Operation

1. **Spin only balanced loads.** Use only 75 mm capillary tubes, ensuring that the clay plug is aligned into the red rubber cushion. When balancing, placing an empty capillary tube across from the sample tube is sufficient. Proper balancing will improve sample separation and extend the life of the centrifuge.

2. Double check that the red thumbscrew on the rotor lid is finger tightened, and that the lid grooves are aligned with the rotor tabs.

3. Set the speed to 12,000 rpm and the time to 3 minutes.

4. Press the **START/STOP** button to run the cycle. The unit will stop on its own, beep, and open the lid upon completion.

Note: Always ensure rotor and rotor lid are secure before each use.

Reading Microhematocrits

1. After the rotor has stopped, remove the rotor lid by unscrewing the red thumbscrew and lifting the lid straight up.
2. Place the reader disk over the hematocrit tubes, and adjust the disk until the 0% line is aligned with the bottom of the fluid in the tube (top of the clay).
3. While keeping the bottom of the fluid at the 0% line, turn the reader disk until the top of the fluid is aligned with the 100% line.
4. Read the separation line in the middle for the PCV results.

Care, Maintenance, and Troubleshooting

The Zip-IQ is designed to be maintenance-free. With proper care, this centrifuge will provide years of service. However, if repairs should be needed, please contact LW Scientific, Inc.

1. Use only quality 75mm capillary tubes and fresh clay sealant. Lower-quality tubes may fracture and/or old clay may allow blood to leak out of tube.
2. Never force a tube into the slots in the hematocrit rotor. The rotor was designed to hold the most common sized 75mm capillary tubes.
3. Clean with common laboratory disinfectants regularly. Bleach may cause the red rubber cushions to crack, so avoid using harsh cleaners. The red rubber cushions are replaceable. Do not allow moisture to seep into the centrifuge and do not immerse the electrical components in any liquid during the cleaning process.
4. Because of safety issues with high g-forces in a centrifuge, it is recommended that rotors be inspected monthly for wear and fatigue. If there is any indication of wear, the rotor should be removed from service. Contact LW Scientific for return instructions so the rotor can be evaluated by a technician for repair or replacement. After 2 years of service, it is recommended that rotors be returned to LW Scientific for inspection or replacement.

Following these procedures will ensure safety of lab personnel as well as extend the life of the centrifuge.

P. 770.270.1394 F. 770.270.2389 865 Marathon Parkway Lawrenceville GA 30046

Specifications

Speed range: 500-12000 rpm

Maximum RCF: 13680 g

Max. Volume: 24, 75mm capillary tubes

Input Voltage: 100-240VAC; 50-60 Hz

Output Voltage: 24V DC, 6.5 amps

dBA: 63 dBA +/- 3 dBA @ 18"-24"

Timer: 15 sec - 99 min

Display: LCD Digital

Height: 6.2" (158 mm)

Depth: 10.6" (270 mm)

Width: 10.6" (270 mm)

Weight: 9.9 lbs (4.5 kg)

Boxed Dimensions:

Height: 8.75" (203.2mm)

Length: 11" (279.4mm)

Width: 15" (381mm)

Weight: 12.25 lbs (5.56kg)

RECOMMENDED SPEED & TIME:

PCV - Microhematocrits: 12,000 rpms – 3 minutes

G-Force Chart
Rotor Radius: 8.5 cm

Speed (rpm)	G-Force (RCF)
500	24g
1000	95g
2000	380g
3000	855g
4000	1520g
5000	2376g
6000	3420g
7000	4650g
8000	6080g
9000	7700g
10000	9500g
11000	11500g
12000	13680g

P. 770.270.1394 F. 770.270.2389 865 Marathon Parkway Lawrenceville GA 30046