



**Microhematocrit Centrifuge
OPERATION MANUAL**

For use with MFR# CMH30.



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UNICO Microhematocrit Centrifuge

Thank you for choosing the UNICO Microhematocrit Centrifuge. This precisely built, durable centrifuge will give years of service to even the busiest office practice. Our technical and customer support departments are ready to assist you with any questions or comments you may have.

If you require an additional accessory or spare part, please contact your distributor or email info@unicosci.com.

DESCRIPTION/ INTENDED USE

UNICO Microhematocrit Centrifuge is a high-speed centrifuge designed for the separation of capillary microhematocrit samples.

FEATURES AND SPECIFICATIONS

- Twenty-four place rotor with replaceable rubber gasket and screw down metal lid.
- Digital 5-minute timer.
- Air-cooled, brushed type AC motor.
- Molded housing for years of dependable use.
- The safety switch in the lid shuts off the motor when lid is lifted.

Speed	12000 RPM
RCF	14,837g
Power Input	110V
Width	9inches
Depth	10inches
Height	9inches
Weight	18lbs

CONSTRUCTION

The UNICO Microhematocrit Centrifuge is made of molded plastic that is acid and reagent resistant. The lever type opening latch allows easy access and yet provides sure closing. A safety switch disconnects the power to the motor whenever the latch is lifted. The hematocrit rotor is made of an aluminum shell for durability and lighter weight. The brushed motor is mounted on rubber mounts to provide quiet running and less vibration.

PERFORMANCE

For optimal performance we recommend using plastic microhematocrit tubes up to 75mm long. Fix speed 12000 RPM. Timer can be set in 1–5-minute range in 1-minute increments.

INSTALLATION

Open the shipping box; unpack the centrifuge and reader.

Inspect for any possible shipping damage. If you note any damage, please contact your distributor as soon as possible.

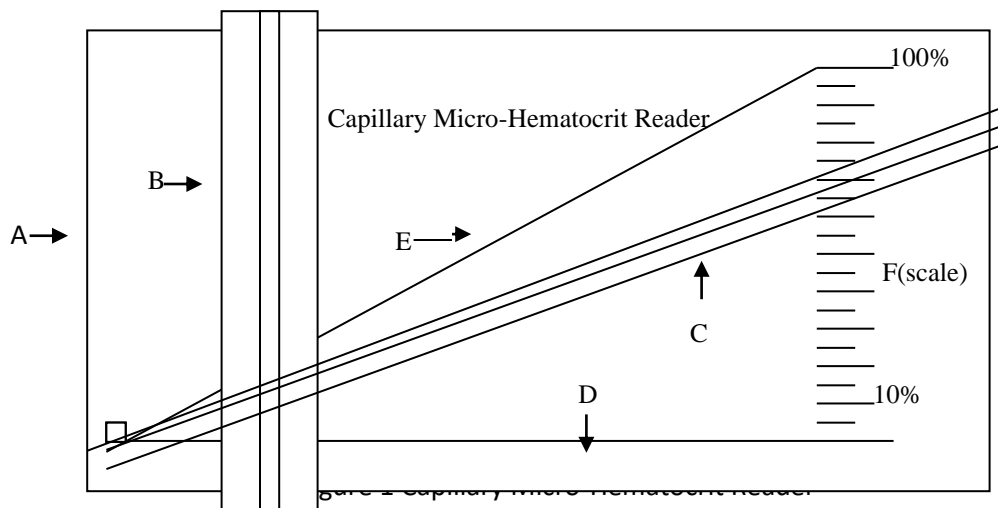
Save the original packaging. If it becomes necessary to return the instrument, we ask that it be returned in the original packaging.

OPERATION

1. Plug the centrifuge into a 110-voltage power source and turn the power switch on the back of the unit ON.
2. Open the lid by lifting the latch lever on the front of the unit, unscrew the rotor cover and set it aside. Make sure the black gasket is located inside the rotor rim. Digital Display will show the word Lid - it means the centrifuge lid is open.

- Place the filled capillary tubes into the grooves of the rotor. The sealed end of the capillary tube should rest against the gasket inside the rotor.
- Screw the rotor lid down snugly. Do not overtighten the lid.
- Close the lid and be sure that the latch lever is down and fully engaged. Display will change to show the time setting from the previous spin.
- Change timer setting, if necessary, by repeatedly pushing Select Run Time button until desired time is on display. Push Start /Stop button to start/stop the run.
- Wait for the centrifuge rotor to come to a complete stop and the display change to OPEN. Open the lid, unscrew the rotor lid, and remove the capillary tubes.
- Read the results without delay.

READING OF HEMATOCRIT RESULTS



Key:

- A - Hematocrit reader.
- B - Capillary holder (slider moves from left to right).
- C - Indicator (moves up and down across scale).
- D - Zero Line.
- E - 100% Line.
- F - Scale

Note: Hematocrit results should be read at once. Delay will cause an error in the readout and values expected.

- Set the hematocrit reader (Fig. 1) on a flat level surface with the words “Capillary Micro-Hematocrit Reader” facing you.
- Make sure the indicator lever (C) is at the bottom of the reader even with the zero line and that the capillary Holder (B) is at the extreme left of the reader.
- Place the capillary tube to be read in the groove of the capillary holder (B) with the clay sealed end toward the bottom of the groove. Using your index finger, slide the capillary up until the juncture (interface) of the packed red cells and the clay is directly over the Zero Line (D).
- Locate the top of the fill volume of the tube, move the capillary holder to the right so that the 100% line bisects (cuts across) the meniscus (top) of the straw-colored fluid (plasma).

5. Move the Indicator lever so that the back line on the lever is directly over the separation between the packed red cells and plasma.
6. Look at the scale on the right of the reader (F). Where the black line of the indicator crosses over one of the scale numbers that is the hematocrit value for that sample.

CORRELATION AND CONTROLS

Although the UNICO Microhematocrit Centrifuge is an excellent instrument with accurate, repeatable results, it cannot be expected to correlate exactly with every method for performing hematocrits. Automated hematocrits as part of a C.B.C. will not generally correlate with hematocrits that are centrifuged. This is due to the very nature of how the hematocrit is determined in the two methods. More information regarding the correlation between spun and automated values can be found in various laboratory reference manuals as well as C.L.I.A. information. When using commercial controls with the UNICO Microhematocrit Centrifuge, be sure to refer to the value section for spun hematocrits.

MAINTENANCE

This centrifuge is designed to be relatively maintenance-free. The motor has permanently sealed bearings, so oiling is not necessary. The motor does use brushes although the brush replacement interval is very long. Brushes are available from UNICO and are easily accessible by removing the screws on the bottom of the unit. Please make sure the unit is unplugged before attempting to replace the brushes. A surface cleaner such as Formula 409 can be used to clean the outside of the instrument. Care should be used to make sure that cleaning fluids do not enter the inside of the instrument. The rotor chamber and cover can be disinfected with a mild solution of bleach or other disinfecting liquid and allowed to dry. Do not drench or immerse the unit in any liquid! Be sure to disconnect the power before attempting to clean.

Periodic Rotor and Gasket inspection and replacement

Rotors and Gasket should be removed and inspected for defects at least every 6 months or each time the rotor is removed for cleaning.

CALIBRATION

According to Code of Federal Regulations Title 21, centrifuges require verification or calibration as follows:

- 1) Before initial use.
- 2) After repair or adjustments.
- 3) 6 month after use.

The speed should fall within the range of 12000+/-600.

The centrifuge timer, however, should be checked for accuracy at least every 3 month. The timer is designed to be accurate to 3min ± 10sec.

SAFETY

Your UNICO Microhematocrit Centrifuge is a carefully designed and built instrument. When operated properly, it presents no safety hazards, however, please take note of these safety precautions.

LID

CAUTION: NEVER OPEN THE LID UNTIL THE ROTOR HAS COME TO COMPLETE STOP!

Your centrifuge is equipped with a lid safety switch that prevents operation when the lid is open. Do not attempt to override this feature. If you suspect that the lid safety switch or other

component of this instrument is not working properly, do not attempt to operate the unit. Call UNICO customer service.

LOAD BALANCE

Always make sure that the load is balanced before operating the unit. If the centrifuge is not balanced properly, it could suffer damage. If excessive noise or vibration is noted during the run, discontinue the run and check the balance.

ELECTRICAL SHOCK HAZARD

Do not attempt to operate this instrument near water or liquid spill. Unplug the unit before cleaning or repairing. Periodically check the condition of the power cord for cuts or damage. Do not operate with a damaged cord.

BIOHAZARD

If a tube breaks, a biological hazard may exist. Unplug the instrument. Clean using approved laboratory procedures. Always wear the proper protective clothing and gloves. Use a suitable disinfectant and dispose of the sample properly. Refer to the guidelines set forth by OSHA, CLIA, etc.

SERVICE:

If you feel that your centrifuge needs service, please call us and speak to a customer service representative. REPAIRS OR MODIFICATIONS MADE TO THE CENTRIFUGE BY AN UNAUTHORIZED PARTY WILL VOID THE WARRANTY.

PROBLEM SOLVING

1. Centrifuge does not start.
 - a) Check to determine if centrifuge is plugged in and the power switch is ON
 - b) Check that centrifuge lid is closed and latched. Adjust the screw at the edge of the lid latch as necessary for the lid latch to be properly closed.
2. Excessive noise when running. High speed centrifuges are inherently noisier than other centrifuges, but if the noise is irregular or different in tone, be sure that there is no paper or debris in the rotor or rotor chamber.