



REVSCI

REVOLUTIONARY SCIENCE

The RevSpin

Instruction Manual

Instruction Manual for the Revolutionary Science RevSpin Series



REVOLUTIONARY SCIENCE

Manufacturer of Precision Laboratory Equipment

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NOTE: This manual contains important information, safeguards and operating instructions for the operation of the REVOLUTIONARY SCIENCE RevSpin Series Microcentrifuge by Alternative Pioneering Research & Development, Inc. (APR&D, Inc.)

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REVOLUTIONARY SCIENCE

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Introduction

Thank you for purchasing the Revolutionary Science RevSpin Microcentrifuge. We are confident that when used correctly, our microcentrifuge will provide years of reliable service in your lab or classroom. We have made every effort to use high quality, durable parts to deliver the performance expected of instruments costing 2 to 3 times as much.

Please let us know what you think of our products, positive or negative, so we can continue to enhance and improve our products in the future.

Sincerely yours,

REVOLUTIONARY SCIENCE

Recommended Safeguards

1. **CAUTION:** Opening the cover while the rotor is moving can cause damage to test tubes. Always wait until a complete stop before opening the cover.
2. **CAUTION:** RevSpin rotor is **NOT** a biocontainment rotor. Be advised that test tubes can fracture. Biohazardous samples should be centrifuged with extreme caution.
3. **CAUTION:** Old/reused test tubes can become fatigued and fracture more easily.
4. **CAUTION: Always wear eye protection.**
5. While unit is operating, do not lift from bench or invert.
6. Never operate with a cracked, loose or damaged rotor or cover.
7. While spinning, never attempt to remove the cover or touch the rotor.
8. Always make sure the rotor is properly balanced with equally weighted tubes in opposite holes of the rotor (Operating this unit with an unbalanced rotor will cause severe vibration and damage, which is not covered by your warranty!)
9. Never attempt to disassemble or modify the RevSpin microcentrifuge.

Recommended Safeguards (continued)

- I0. Never hold down or bypass the cover safety switch.
- I1. Before operating, make sure the rotor is fully pressed onto the shaft and the thumb screw is screwed on finger tight into the shaft.
- I2. Do not clean or spill on any parts with solvents that may attack plastic or cause cracks in the rotor.
- I3. If the RevSpin is used in manner not specified by the manufacturer, the protection provided by the unit may be impaired.
- I4. Never place objects other than the appropriate microtubes in your rotor.

Intended uses for the RevSpin microcentrifuge:

The RevSpin microcentrifuge is only intended for biological samples and is not recommended for pathogenic, or particulate samples. Toxic, reactive, radioactive or flammable materials must not be used in the RevSpin Microcentrifuge. Total weight limit for biological materials placed in the unit should not exceed 20 grams per tube.

The RevSpin Microcentrifuge is intended for indoor use with a temperature range of 2°C-40°C. The RevSpin Microcentrifuge is not intended for high altitude use.

Recommended Room and Storage Conditions:

- Do not store your RevSpin in direct sunlight, or in dusty or poorly ventilated areas.
- Do not store in a cold or moist room for extended periods of time.
- Never immerse your RevSpin in water.

Operating Instructions

(1) PLACEMENT:

Place unit on a stable, flat, and clean surface, at least 6 inches away from the edge of the counter and other moving equipment. Make sure the power cord is clear of hot surfaces and other hazards.

(2) PREPARE MICRO-TUBES:

Prepare samples in micro-tubes so that tubes are filled to equal levels.

(3) OPENING and CLOSING THE COVER:

To open the cover, turn off centrifuge and press the button after the rotor stops.

NEVER OPEN DURING OPERATION

WARNING: Removing cover while rotor is spinning will activate the emergency stop mode. This may cause test tubes to fracture.

(4) LOADING:

With the cover off, you can access the rotor, which may be loaded in place or removed for convenience. The rotor has 16 holes. Be sure to never load the rotor in an asymmetrical or uneven manner. Load your REVOLUTIONARY SCIENCE RevSpin only with a symmetrical placement of an even number of micro-tubes in the same ring of holes. For example, 2 tubes of equal weight will cause imbalance if one is placed in the outer ring of holes, and the other is placed opposite in the inner ring. If only one sample needs to be spun, you must add a second tube on the opposite side of equal weight.

(5) REMOVING THE ROTOR:

The rotor is designed to snap into place on the shaft. To remove, grip the rotor on both sides and lift firmly. If the rotor does not slide off with hand force, it may be gently pried off with two appropriate levers evenly applied to opposite sides. After several removals and insertions, the fit should become less tight.

(6) INSTALLING THE ROTOR:

Before operating, make sure the rotor is fully pressed onto the shaft and the thumb screw is screwed on finger tight into the shaft. If the rotor becomes loose on the shaft, or the two halves begin to separate, do not use it! If under warranty, return the rotor to the factory for replacement.

(7) CONNECTING THE POWER:

Plug the power cord to your RevSpin into a grounded electrical outlet of the appropriate voltage. The RevSpin Microcentrifuge requires only 180 watts, so any circuit should do. Make sure the cord is routed safely away from mechanical hazards and hot surfaces. Avoid routing the cord where others may trip on it or snag it.

(8) TO OPERATE THE REVSPIN MICROCENTRIFUGE:

Replace the cover after loading the rotor. The motor will run only when the cover is locked in place. Select the proper speed for the task at hand. The pulse mode may be used to deliver lower speeds than the low speed setting of 6,000 RPM by pulsing the motor briefly a few times. The RevSpin RS-102 is not equipped with a timer. We do not recommend running spin times of longer than 30 minutes, or operating the unit unattended.

REVSPIN RS-200 TIMER OPERATION:

To select the specific time needed to run your samples press the left button to increase the time (in minutes) and the right button to decrease the time. If no time is selected the centrifuge automatically starts at 00 and counts up (in minutes.)

REVSPIN RS-200 SPEED SELECTION:

Close cover after loading the rotor. The motor will run only when the cover is fully engaged and locked in place. Select the proper speed by pressing the upper middle button. Note the speed selection table on the front of the unit.

REVSPIN RS-200 START/STOP/PULSE OPERATION:

Once you have selected the speed and time (a selected time is optional) press the lower middle button for 1+ seconds to start rotor rotation. To stop rotor rotation press the lower middle button again. You may also use pulse mode by quickly pressing the lower middle button. We do not recommend running spin times of longer than 30 minutes, or operating the unit unattended.

REVSPIN RS-200 IMBALANCE DETECTION:

The RS-200 comes equipped with an imbalance detection system, which instantly cuts power to the motor to prevent damage to unit and specimens. If a loaded rotor is imbalanced the operator will see E1 appear on the display after pressing the START button. When this appears the operator will need to rearrange the tubes in the rotor or check the individual tube weights.

(9) TO PROPERLY STOP THE REVSPIN MICROCENTRIFUGE:

To stop RevSpin RS-102 at the desired time, the operator must turn the knob to the OFF position. The rotor will usually stop in less than 30 seconds. The rotor will instantly stop if the cover is opened, but the use of this function will shorten the life of the motor brushes.

(10) UNLOADING THE MICRO-TUBES:

Once the rotor has completely stopped, the operator may push the button, lift up the cover and remove the tubes, or remove the rotor and unload the tubes elsewhere.

Care and Maintenance

Your centrifuge should be cleaned periodically to ensure optimum performance. Only clean your RevSpin when you are sure that it is not plugged in or spinning. Using a soft cloth soaked in water and mild detergent, wipe the outside of the unit and both sides of the cover. Be careful not to scratch the plastic surfaces with abrasive cleaners or dirty clothes. Make sure you clean any dust or debris from the bottom of the rubber base to permit the rubber to do its job, and avoid sliding around on the bench. You may remove the rotor for thorough cleaning. The rotor may be immersed in water and mild detergent. The rotor should be thoroughly drained and dry before re-mounting on the motor shaft. Avoid spilling water into the unit. If water is spilled, quickly invert the unit and allow to drain for several minutes. Do not disassemble the unit or you will void your warranty. Do not operate on wet surfaces.

Contact Us

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RevSpin Microcentrifuge Specifications

Model No.:	RS-102
Power Requirements:	120 VAC 60 HZ 1.5 amps grounded cord
Net Weight:	5 lb
Dimensions:	19.1cm diameter x 22.9cm tall 7.5" diameter x 9" tall
Motor:	Ball bearing, PMDC, brush type
Speed Selections:	Off/Pulse/6,000/10,000
Display:	Digital
RPM:	High-10,000 Low-6,000
RCF:	High speed-5031/6373 RCF Low speed-1811/3394 RCF
Rotor Capacity:	16 tubes, 1.5 or 2.0 ml
Rotor Type:	45°, unique vertical loading, glass reinforced
Warranty:	2 year, repair or replacement

Model No.:	RS-200
Power Requirements:	100-230 VAC 60 HZ 1.5 amps detachable grounded cord
Net Weight:	5 lb
Dimensions:	19.1cm diameter x 22.9cm tall 7.5 " diameter x 9" tall
Motor:	Ball bearing, PMDC, brush type
Speed Selections:	Off/Pulse/2,000/4,000/6,000/8,000/10,000
RCF Calculation	1,000 RPM 50/64 RCF 2,000 RPM 201/255 RCF 3,000 RPM 453/574 RCF 4,000 RPM 805/1020 RCF 5,000 RPM 1811/2294 RCF
Display:	Digital
Rotor Capacity:	16 tubes, 1.5 or 2.0 ml
Rotor Type:	45°, unique vertical loading, glass reinforced
Warranty:	2 year, repair or replacement



Registration

For your future reference and to expedite answers to your questions, please complete the following information:

Date Purchased: _____

Serial Number: _____

Model Number: _____

Purchased From: _____

Full Two Year Warranty

Your REVSPIN MICROCENTRIFUGE is warranted to be free from defect of material or workmanship under normal use for a period of two years from date of purchase. If your REVSPIN MICROCENTRIFUGE proves to be defective within this warranty period, Revolutionary Science will repair or replace your unit at our option. This warranty will be void if malfunction is caused by accident, misuse, or negligence, including tampering, abuse, or damage in transit. This warranty excludes any relief for incidental or consequential damages. Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you. This warranty gives you specific legal rights, you may also have other rights which may vary from state to state. Your RevSpin comes with several built in safety features. Any attempt to interfere with the operation of these features makes this warranty null and void.

To validate this warranty, be sure to complete and return the Warranty Card, on page 9.



Please fill out this page, or a copy of it, and send it to the address below to validate your warranty.

Warranty Registration Card for the
REVOLUTIONARY SCIENCE REVSPIN MICROCENTRIFUGE.

(Please Print)

Model _____ Date Purchased: _____ Serial Number: _____

Purchased From: _____

Name of Purchaser: _____

Company School Individual (Please check one)

Name of institution: _____

Department: _____

Address: _____

Intended use: _____

Where did you hear of our product?: _____

Comments: _____

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