L550
Table-Top Low-Speed Large Capacity Centrifuge
Operational Manual

Madell Technology Corp.

http://www.madelltech.com

1. Model and name: L550 Table-top low-speed large capacity centrifuge.

2. Application:

The centrifuge can be used in the fields of clinics, medicine, biochemistry, genetic engineering and radioimmunology etc.

3. Technical parameters:

Max. Speed:	5000r/min
Speed control:	±30r/min
Max. RCF:	5310×g
Time set range:	0-99min
Max Capacity:	4×400ml
Power:	AC110V 50Hz 6A
Noise:	＜65dB (A)

4. Rotor Parameters:

L550 can be equipped with 7 swing rotors, and 5 brackets can be replaced for No.5 rotor. The parameters are shown in the following table.

Rotor	Max speed (r/min)	Capacity (ml)	Max RCF (×g)
No.1 angle rotor	5500	12×10	4240
No.2 swing rotor	4200	4×37×7	3300
No.3 swing rotor	4200	4×400 (circle cup)	3640
No.4 swing rotor	4200	2×400 (elliptical cup)	3150
No.5 swing rotor	5500	4×50	5310
	5500	4×100	
	4200	4×2×50	3100
	4200	4×2×100	
	4200	4×8×15/10/7	
	4200	4×18×7	
	4200	4×12×5/10	
No.6 swing rotor	4200	6×300 6×10×5	4200
	4200	6×7×10/12	4200
No.7 micro plates rotor	4000	2×4×96(hole)	3200

5. Major Features:

The L550 centrifuge features with microprocessor control, touching buttons controls on the front panel, digital display, DC brushless motor and electronic door lock.

1. Special vibration isolator for ideal effect of vibration damping and automatic balancing.

2. PWM Speed is control for high accuracy and fast Acc/Dec. The fastest acceleration time is 30 seconds and the fastest deceleration time is 28 seconds. Acc and Dec time can be set freely; the brush-less DC motor ensures quiet operation.

3. Ten user-defined programs are stored, and RCF value can be calculated automatically.

4. Three swing rotors are available, and the brackets can be replaced for various tube applications with convenient operation.

5. Electronic door lock for safe operation. The centrifuge will not work if the lid doesn’t close properly.

6. Operation Procedures:

1. Place the centrifuge on a stable and flat table or platform; conduct a visual inspection for balance; make sure it is placed properly by manual shaking.

2. Plug in the power supply and press the power button. (it is located on the back of centrifuge).

3. Press the “STOP” button; open the cover (if power supply is not plugged, draw the string in front of the centrifuge). Arrange test tubes (in

even numbers and test sample should be equal) into the rotor, and set them in balance. Tight the tube caps securely. Rotate the rotor by hand, check if it works smoothly.

4. Close the door and make sure it is locked properly.

5. Set the speed and time according to your requirements.

When the centrifuge is not running, press the “SET” button to select the rotor, set the time and speed. When the centrifuge is being set up, the stop indicator should be on and the running indicator flashes. Speed and time can also be set when the centrifuge is running by pressing the “SET” button. The running light should be on and stop light flashes at this time.

1) **Rotor selection:** press the “SET” button when the centrifuge is not running (the rotor LED should be on) and then press “▲” or “▼”to select the desired rotor

2). **Speed:** press the “**SET”** button (the speed LED should be on) and then press the button “▲”or “▼”to set the desired operation speed (max. speed is 5300r/min).

3). **Time:** press the “**SET**” button (the time LED should be on) and then press “▲”or “▼”to set the operation time (max. time is 99min, count down).

4). When the above three set up steps are finished, press the “**ENTER”** button to confirm the selection of speed and time, and then press “START” to start the centrifuge (if it doesn’t start, please check

the door lid).

5). Press the “**RCF”** button (the RCF light should be on) to check the RCF value under the current speed. The centrifuge will be back to normal operation in 3 seconds.

6). When the time counts down to “0”, the centrifuge will stop automatically; when the speed slows down to 0 r/min, the buzzer rings 15 times; press the “RCF” button to stop it; The centrifuge will stop but the buzzer does not ring if the “STOP” button is pressed when the centrifuge is running.

7). When the rotor speed reaches to zero, the door lid opens automatically. The tubes can be taken out only at this time (if the door lid can’t be opened, please draw the string under the centrifuge).

8). Power off and unplug the power cable.

7. Notices and Precautions:

1. Please go through this operation manual carefully before operation and always keep it at hand during operation.

2. Place the centrifuge on a steady platform or table. Make sure that four rubber cushions are in balance to prevent vibration.

3. Power supply must have good ground connection.

4. Moving the centrifuge during operation is absolutely prohibited. Do

not put anything on the door lid to prevent it from damage.

5. The liquid inside the centrifuge tubes should be even. Large differences may cause severe shaking when the machine is in operation. If this happens, the centrifuge should be stopped and the tubes have to be re-arranged. The tubes should be placed symmetrically by even numbers.

6. If the centrifuge tubes break when the centrifuge is running, severe shaking will occur. The centrifuge should be stopped for inspection.

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