



Separatory Funnel Shaker

LB-55SFS

Index

Sr. No	Title	Page no
1.	Safety Measures	2
2.	Introduction	3
3.	Features	3
4.	Specifications	3
5.	Applications	3
6.	Installation	4
7.	Operations	5

1. Safety Measures

- Read this manual in detail before operation and ensure to operate strictly as required.
- Kindly connect the ground wire by a professional electrician as standard before powering on.
- To ensure the equipment's safety, install the Circuit Breaker for electricity leakage prevention by professional personnel.
- This equipment is sensitive to electricity pressure fluctuation. Don't use a power supplier socket together with the large electricity consumption equipment such as an air conditioner, heater, etc. If the electricity pressure influences the machine's working apparently and use the electricity-stabilized device with 220V output voltage and 1000W above output power.
- Kindly note not to use a wet rag to clean or use water to wash the machine directly to avoid short circuits & human injury that may be caused by the machine's damage or electricity leakage.
- Before loading the separation funnel into the Vertical Shaker, check the items carefully as below.
 - 1) Check whether the machine is powered off.
 - 2) Check whether the equipment stands stable.
 - 3) Check whether the dull polished inner cap is being installed, OK.
 - 4) Check whether the teflon screw cap is screwed at the sealed place.
 - 5) Check whether there is any device or garbage that may influence the machine's working.
 - 6) Kindly start the machine only after the complete confirmation, otherwise, it may cause electricity leakage or equipment burnout.

2. Introduction

Separatory Funnel Shaker LB-55SFS carries out intensive vertical shaking of about 6 samples in exact similar conditions for any identical or comparative samples simultaneously. With a speed range of 50 to 300 rpm and flasks up to 40 mm width can be used.

3. Features

1. Intensive vertical shaking
2. 6 samples processed under identical conditions
3. Two holders for a total of 6 flasks included
4. Easily adjustable flask holder (max. 5 flasks per side)
5. LED display
6. Feedback loop to a digital controller

4. Specifications

Model No	LB-55SFS
Motion type	Vertical reciprocating
Speed range	50 rpm ~ 300 rpm
Accuracy	± 1 rpm
Vertical stroke length	40 mm
Maximum load each side	3 kgs
Timer	0 ~ 60 min or continuous operation
Power	90 W
Overall (W × D × H)	445×730×505 mm
Weight	24 kgs

5. Application

Used in biotech, chemical, microbiological and medical laboratories to process different samples and for extraction.

6. Installation

6.1 Unpacking Inspection

Be cautious not to damage the machine's exterior or parts while opening the box. After the box is opened, confirm if the machine is what you want, then check in detail and confirm whether the parts are complete and intact or not.

6.2 Transport and Storage

- Package with inner foam in carton to avoid pressing. Side or inverted placing is forbidden. High pressure or pressure is forbidden.
- Adapt to ordinary transportation. Labeled with note mark “**Upside**”, “Pressure Forbidden”, etc.
- No drop or crash during load, transport & unload.
- Placed in room of which with temperature -10°C to +40°C & relative humidity less than 80%.

6.3 Install Trial

- To ensure the equipment with horizontal stability, Kindly place it on a solid and smooth table with a larger outlook size than our machine.
- Connect power & electricity cables as safety standards required.
- Start-up power under idle loading circumstances for machine trial.

7. Operations



Figure-1

- 1) Close the dull polished inner cap of the separating funnel, of which samples waiting for shaking & extraction. Do it as required and keep teflon screw cap sealed. Ensure the inside liquid is not leaking.
- 2) Loose the fixed screw which is on the fixture side face of the Vertical Shaker; Place the top of the separating funnel on the plastic base of the Vertical Shaker; Adjust the fixture down to the appropriate location and fix the screw. Then the separating funnel is fixed & installed **OK**.
- 3) Check and ensure nothing will contact the machine or hinder the separating funnel shaking.
- 4) Start the leakage protection switch which is under the control panel, the screen will display default parameters, or the parameters used last time, meanwhile, you will hear a hinting tone(**"beep"**) which means everything is normal and self-inspection passed.
- 5) The running mode will be shown on the screen when the machine starts.
1111111: Constant speed running mode
1010101: Interval running mode
1231231: Three sections of curves running mode.
- 6) As per the testing requirements, Press the **add/reduce** button to set the shaking time. Curve running cannot adjust the time.
- 7) As per the testing requirements, Press the **add/reduce** button to set the shaking frequency. Curve running cannot adjust the time.
- 8) Long press the **"Start"** button after finishing the parameters set. The machine will be running as per the set shaking frequency, and the running time will be shown on the screen (Countdown or Counting alternative).

- 9) When the machine is running, the machine will be stopped if you long press the **"Start"** button at any time, and the screen will show **"PAUSE"**. It is convenient for operators to deal with the sample temporarily.
- 10) The machine stops working automatically when the time is up as set and back to the original parameters, meanwhile, it will have three times of hint town ("beep, beep, beep").
- 11) Long press the **"Stop"** button to stop the shaking process.
- 12) Kindly pay attention to closing the leakage protection switch and taking down or installing the separating funnels after the machine is powered off.

7.1 Parameter Setting

Speed Self-calibration Function

Press the stop button, turn on the power switch, and the system enters the state of speed self-correction.

7.2 Single Self Calibration

If you only need to calibrate a specific rotation speed, it is recommended that you use the single self-calibration function. Use the increase/decrease keys under the left window to adjust the target rotation speed that needs to be calibrated. Press the start button and the instrument will start a single self-calibration, which takes about 3 minutes. After a single self-calibration is completed, the instrument will make a long beep. Turn off the leakage protection switch under the control panel and then turn it on again to make the calibration parameters take effect.

7.3 Full Self-Calibration

If you need to calibrate the entire range of speeds, it is recommended that you use the full self-calibration function, which can be adjusted to "000" by using the increase/decrease keys under the left window. Press the **"start"** button and the instrument starts to perform full self-calibration, which takes about 30 minutes. After all self-calibration is completed, the instrument will make a long beep. Turn off the leakage protection switch under the control panel and turn on the power again to make the calibration parameters take effect.

7.4 Parameter Setting

Turn on the power switch, press the **"Stop"** button for three seconds in the standby state, and the system enters the parameter setting state. The left window displays the parameter number of **"P-XX"**, and the right window displays the parameter values that can be adjusted. Use the increase/decrease buttons under the left window to adjust the parameter number and use the increase/decrease buttons under the right window to adjust the parameter value.

Separatory Funnel Shaker LB-55SFS

7.5 The meaning and adjustment of specific parameters are shown in the following table.

Parameter No	Setting Range	Function Description
P-21	0-900s	0: Automatically memorize the running time set during the last use 1-900: No memory, use the default time each time you turn on the machine
P-22	0-300RPM	0: Automatically memorize the running speed set during the last use. 0-300: No memory, use the default speed each time you turn on the machine.
P-23	0-1	0: The display time is in the clockwise mode 1: The display time is in countdown mode.
P-24	0-2	0: Running at a constant speed. 1: "Shaking -Standing" interval operation 2: Three-stage curve oper
P-25	10-900s	10-900: Interval running time
P-26	10-999s	10-900: Interval stop time
P-27	100-300rpm	100-300: The first speed of curve operation
P-28	10-900s	10-900: The first period of the curve Operation
P-29	100-300rpm	100-300: Second speed of curve operation
P-30	10-900s	10-900: The second period of curve operation
P-31	100-300rpm	100-300: The third speed of curve operation
P-32	10-900s	10-900: The third period of curve operation.



Labotronics Scientific. 1007 N Orange St., Wilmington, DE 19801, USA.
info@labotronics.com | www.labotronics.com