

vacuum aspiration system with two liter PP collection bottle

Vacuum aspiration system is an efficient tool designed for laboratory liquid handling, especially for safe aspiration and waste liquid management of biological samples, biohazardous substances and other sensitive liquids.

Vacuum Aspiration System

Features

1. Highly integrated design: compact structure, occupies little space, suitable for a variety of experimental desktop use.
2. Built-in vacuum pump system: no external pump body, plug and play, convenient and efficient.
3. Adjustable vacuum suction: electronic touch panel can quickly adjust the suction strength, suitable for different liquid viscosity and processing needs.
4. Non-contact level detection: advanced level sensing technology automatically monitors the height of the liquid in the bottle, effectively preventing overflow contamination.
5. Replaceable adapter: equipped with a variety of suction tip interface, strong compatibility, suitable for different experimental operations.



Advantages

1. Safe operation: non-contact liquid level monitoring significantly reduces the risk of biological contamination. The system is equipped with a high-efficiency sterile filter, which can block bacteria, viruses and other particles from contaminating the pump body.
2. High-precision control: vacuum adjustment is precise and controllable, repeatable, especially suitable for cell culture, RNA extraction and other sensitive operations.
3. Easy to clean and maintain: silicone tube and PP material collection bottle can be sterilized at high temperature, the system as a whole is easy to clean.
4. Humanized design: handheld controller comfortable grip, long-term use without fatigue. Electronic panel simple and intuitive, suitable for different levels of experience in the operation of personnel.

Working Principle

The system generates negative pressure through the built-in oil-free vacuum pump, and when the operator activates the suction controller, the vacuum force extracts the liquid from the target container into the collection bottle. The liquid level detector in the system utilizes infrared or ultrasonic sensing technology to monitor the liquid level in the bottle in real time, and automatically stops suctioning when the liquid level is close to the upper limit to prevent overflow. The whole system operates in a sealed pipeline, effectively isolating the external air and pollution sources.

Application Areas

1. Molecular biology: RNA, DNA extraction process of waste liquid suction and buffer removal.
2. Cell culture experiments: removal of culture medium, washing cells, sucking supernatant.
3. Immunoassay experiments: ELISA, Western Blot and other frequent washing and pipetting scenarios.
4. PCR laboratories: liquid residue cleanup in the sample preparation area.
5. Clinical medicine: can be used in hospitals to deal with dangerous samples or aspirate infected samples. Laboratory to deal with dangerous samples or aspirate infectious liquids.
6. Environmental science: dealing with contaminated water samples, etc.

Standard Configuration List

1. Vacuum aspiration system mainframe, including built-in vacuum pump.
2. 2L high-strength polypropylene PP liquid collection bottle.
3. High-efficiency sterile air filter.
4. High temperature resistant silicone vacuum hose.
5. Handheld multi-function controller.
6. Single-channel 200 μ L tip adapter.
7. Single-channel stainless steel 40mm pipette tip.

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Model	VA10
Aspiration rate	14ml per second
Vacuum range	-30mbar to-750mbar
Vacuum pump	Oil free piston pump
Dimensions	150x150x250mm
Weight	2.4kg
Power supply	230Vac, 50Hz or 110Vac, 60Hz