BIOSPECTRIX PVT LTD

BIOspectrix

BIOSPECTRIX

Vacuum centrifugal concentrator

Efficiency. Performance. Reliability.



High Performance

Reliable & Safe

Time Saving

Easy to Use

Efficient Concentration
Preserve your samples with maximum recovery.

Sample Friendly
Ideal for heat sensitive samples.

Advanced Technology
Engineered for precision and consistency.

Trusted Quality
Built with high quality standards for reliable performance.

BioSpectrix Pvt. Ltd | Plot-211, 3rd Floor, Okhla Industrial Area, Phase-3New Delhi -110020, India | www.biospectrix.co | sales@biospectrix.co

Biospectrix Vacuum centrifugal concentrator Introduction

Product Overview

The vacuum centrifugal concentrator is a core laboratory equipment that integrates vacuum technology, centrifugal technology and mild heating technology.

It is mainly used for rapid concentration, drying or solvent removal processing of liquid samples (such as aqueous solutions, organic solvent solutions, biological samples, etc.), and is widely applied in fields such as molecular biology, biochemistry, medical testing, and environmental analysis. It is a key tool in the sample pre-treatment process.

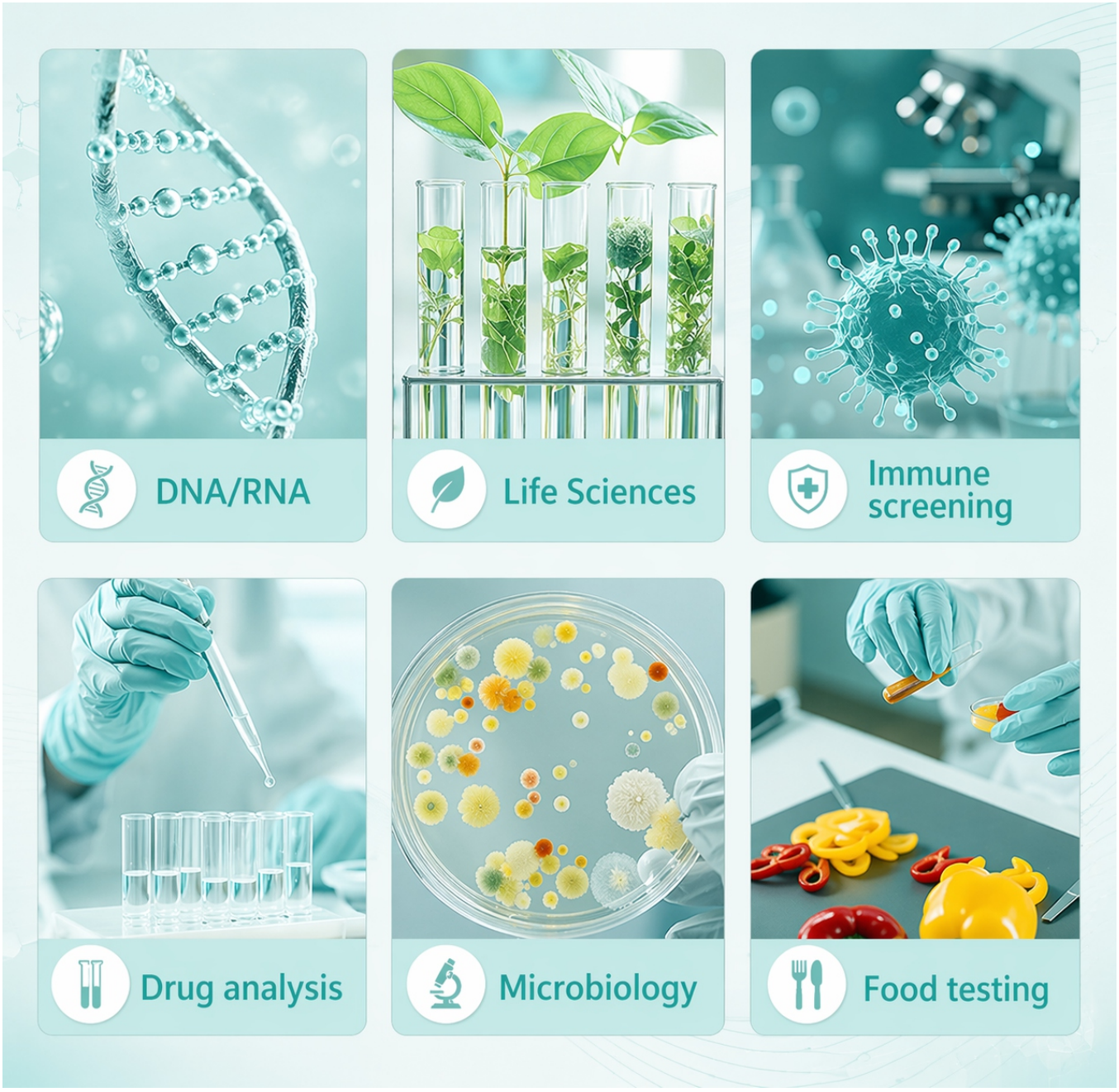


Working principle

When the pressure decreases, the boiling point of the solvent also drops. When the pressure drops to a certain level, at a relatively lower temperature, the solvent When the pressure decreases, the solvent can boil and evaporate. To prevent sample evaporation and cross-contamination, high-speed centrifugal rotation technology is adopted to ensure that the sample remains within the sample tube and does not spill out.

Technical Advantages

- **High throughput -** Can process dozens to hundreds of samples simultaneously, without cross-contamination.
- **Low-temperature concentration -** Prevents sample loss, denaturation, loss of activity, and oxidation.
- **Less loss -** Samples do not produce foam, resulting in less loss and higher yield.
- **Safe and simple -** One-click operation, safe and convenient, avoiding accidental operation.



Core Advantage

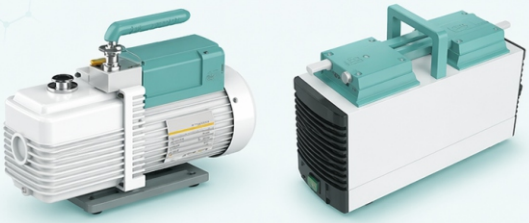
Compared with traditional methods such as "water bath heating concentration" and "rotary evaporator concentration", the vacuum centrifugal concentration instrument has significant advantages:

- **Low-temperature sample protection:** In a vacuum environment, solvents vaporize at low temperatures, which enables the processing of heat-sensitive and easily oxidizable samples, thereby maximizing the retention of sample activity and purity.
- **Efficient and rapid:** The combination of centrifugal force, vacuum, and gentle heating enhances the concentration efficiency by 3-5 times compared to traditional methods (for example, 1 mL of aqueous solution can be concentrated to near dryness within 10-15 minutes).
- **High recovery rate:** Centrifugal force prevents sample splashing and adhesion, and the recovery rate is typically ≥ 95%, reducing sample waste (especially suitable for precious samples).
- **Batch processing:** By adapting to different rotors, it can handle 12-96 samples simultaneously (such as 96-well plate rotors), meeting the requirements of high-throughput experiments.
- **Operation convenience:** Automated parameter settings and protection functions, no need for manual supervision, reducing the operational threshold; some models support "one-click concentration", enabling novices to quickly master it.

Optional accessories



Cold trap: -50℃、-65℃、-70℃、-110℃

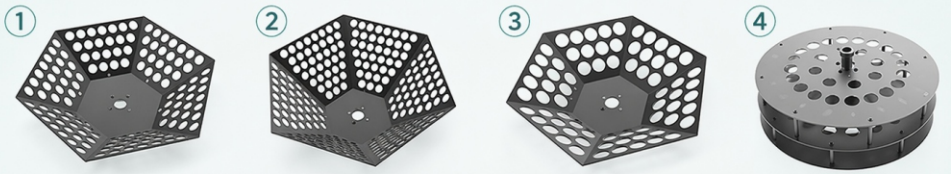


Various specifications of oil pumps
and diaphragm pumps are available for selection.



Imaging instrument

The types of rotors are diverse and easy to replace.



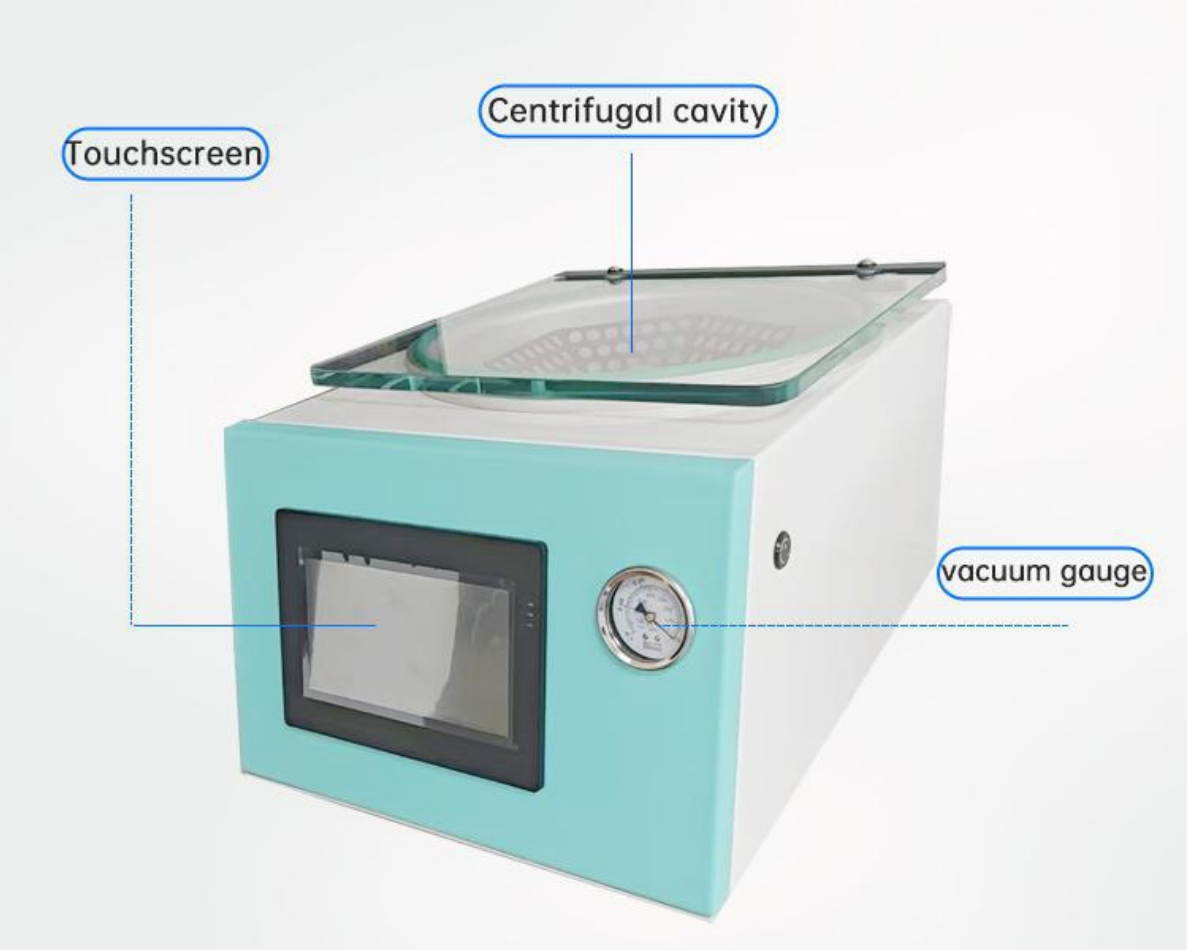
① 1.5mL/2mL×132
② 1.5mL/2mL×240
③ 5mL×72
④ (10-15mL)×28



⑤ 50mL×8
⑥ 100mL×8
⑦ 250mL×4
⑧ 2x2x96 enzyme-linked plate

A range of practical rotors in different capacities is offered, which can be used in various scientific research areas.

Structure and Parameters



Model	BSVC-BXT-ZKNS-A	BSVCBXT-ZKNS-B	BSVCBXT-ZKNS-C	BSVCBXT-ZKNS-D
	Basic type	Conventional type	Frozen type	Integrated type
Characteristics	Fully automatic vacuum control	External vacuum pump (optional internal vacuum pump)	Support low-temperature concentration	Integrated design, three-dimensional, small size, saves space
Maximum rotational speed	0-2000r/min			
Maximum centrifugal force	590Xg			
Compatible rotor capacity	184*1.5ml/2ml ; 132*1.5/2ml ; 72*5ml ; 24*15ml ; 12*50ml ; 8*100ml ; 4*250ml ; 2*96Orifice plate			
Display mode	7-inch touch screen		4.3-inch touch screen	7-inch touch screen
Limit vacuum value	< 10pa			
Timing Range	0-99H59MIN			
Centrifugal imaging function	Optional feature, enabling the observation of sample concentration without stopping the machine operation.			
Temperature control range	Room temperature -100 ℃, 0.1 ℃ Incremental		-10 ~ 100 ℃, 0.1 ℃ Incremental	Room temperature -100 ℃, 0.1 ℃ Incremental
Power supply	AC220V 50Hz/60Hz 10A			
Noise	≤50dB(A)		≤60dB(A)	
Overall Dimensions (L*D*H)	520*350*240mm		550*560*240mm	360*560*240mm
Total power	1300w		1200w	800w
Machine weight	30kg		60kg	55kg



Model	BSVC-BXT- ZKNS- A
	Basic type
Characteristics	Fully automatic vacuum control
Maximum rotational speed	0-2000r/min
Maximum centrifugal force	590Xg
Compatible rotor capacity	184*1.5ml/2ml ; 132*1.5/2ml ; 72*5ml ; 24*15ml ; 12*50ml ; 8*100ml ; 4*250ml ; 2*96Orifice plate
Display mode	7-inch touch screen
Limit vacuum value	＜10pa
Timing Range	0-99H59MIN
Centrifugal imaging function	Optional feature, enabling the observation of sample concentration without stopping the machine operation.
Temperature control range	Room temperature -100 ℃, 0.1 ℃ Incremental
Power supply	AC220V 50Hz/60Hz 10A
Noise	≤50dB(A)
Overall Dimensions （L*D*H）	520*350*240
Total power	1300w
Machine weight	30kg



Model	BSV-BXT-ZKNS -B
	Conventional type
Characteristics	External vacuum pump (optional internal vacuum pump)
Maximum rotational speed	0-2000r/min
Maximum centrifugal force	590Xg
Compatible rotor capacity	184*1.5ml/2ml ; 132*1.5/2ml ; 72*5ml ; 24*15ml ; 12*50ml ; 8*100ml ; 4*250ml ; 2*96Orifice plate
Display mode	7-inch touch screen
Limit vacuum value	＜10pa
Timing Range	0-99H59MIN
Centrifugal imaging function	Optional feature, enabling the observation of sample concentration without stopping the machine operation.
Temperature control range	Room temperature -100 ℃, 0.1 ℃ Incremental
Power supply	AC220V 50Hz/60Hz 10A
Noise	≤50dB(A)
Overall Dimensions （L*D*H）	520*350*240mm
Total power	1300w
Machine weight	30kg



Model	BXT - ZKNS - C
	Frozen type
Characteristics	Support low - temperature concentration
Maximum rotational speed	0 - 2000r/min
Maximum centrifugal force	590Xg
Compatible rotor capacity	184*1.5ml/2ml ; 132*1.5/2ml ; 72*5ml ; 24*15ml ; 12*50ml ; 8*100ml ; 4*250ml ; 2*96Orifice plate
Display mode	4.3 - inch touch screen
Limit vacuum value	＜10pa
Timing Range	0 - 99H59MIN
Centrifugal imaging function	Optional feature, enabling the observation of sample concentration without stopping the machine operation.
Temperature control range	- 10 ~ 100 ℃, 0.1 ℃ Incremental
Power supply	AC220V 50Hz/60Hz 10A
Noise	≤60dB(A)
Overall Dimensions （L*D*H ）	550*560*240mm
Total power	1200w
Machine weight	60kg



Model	BSV-BXT-ZKNS-D
	Integrated type
Characteristics	Integrated design, three-dimensional, small size, saves space
Maximum rotational speed	0-2000r/min
Maximum centrifugal force	590Xg
Compatible rotor capacity	184*1.5ml/2ml ; 132*1.5/2ml ; 72*5ml ; 24*15ml ; 12*50ml ; 8*100ml ; 4*250ml ; 2*96Orifice plate
Display mode	7-inch touch screen
Limit vacuum value	＜10pa
Timing Range	0-99H59MIN
Centrifugal imaging function	Optional feature, enabling the observation of sample concentration without stopping the machine operation.
Temperature control range	Room temperature -100 ℃, 0.1 ℃ Incremental
Power supply	AC220V 50Hz/60Hz 10A
Noise	≤60dB(A)
Overall Dimensions （L*D*H）	360*560*240mm
Total power	800w
Machine weight	55kg