

# DASEA<sup>®</sup> Regenbio automated exosome collection device

Specifically Designed for Exosomes



*Designed for BioProcess*

## ● INTRODUCTION

DASEA® Regenbio automated exosome collection device can achieve exosome isolation, concentration, and enrichment integrately and efficiently. The device is with stable performance and high precision. The consumable kit is fully modularized and fully automated in a closed system, effectively preventing contamination introduced during the sample processing. The device integrates batch data management, multi-parameter control, method management, audit trail, remote management and other functions, and meets the requirements of GMP regulations. User-friendly software design, convenient operation, diverse functions, easy to learn and operate. The historical operations and the operating status of the instrument can be tracked.

## ● FEATURES



### Enclosed

- **Enclosed Design:** Eliminates open operations and reduces sample contamination risk
- **User friendly design:** One-key automated processing mode for complete filtration, concentration, washing and other processes



### Automated

- **Large-Scale Processing:** Single batch capacity up to 10L, 1-4L/h processing speed
- **Precise Concentration and Exchange:** Accurate control of concentration and buffer exchange
- **Online Hollow Fiber Performance Monitoring:** Equipped with hollow fiber integrity and water flux auto-testing for hollow fiber usability assessment

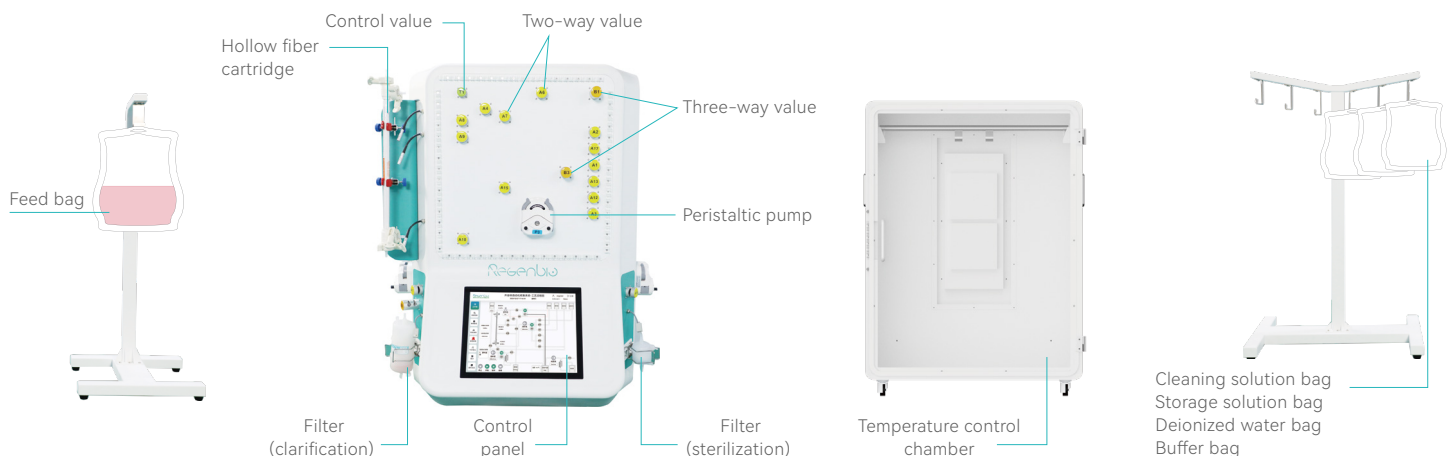


### Scalable

- **Automated TMP Control:** Real-time closed-loop optimization control of transmembrane pressure to ensure consistent processing quality, increase membrane column usage, and save process time
- **Modular Design:** Flexible configuration to meet diverse customer process needs

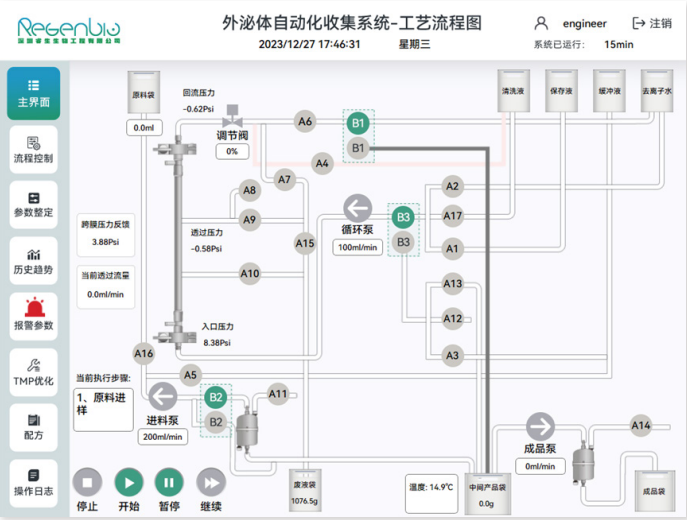
## ● PRODUCT DESIGN OVERVIEW

Three-stage separation and filtration system for enriching exosomes from cell culture supernatants

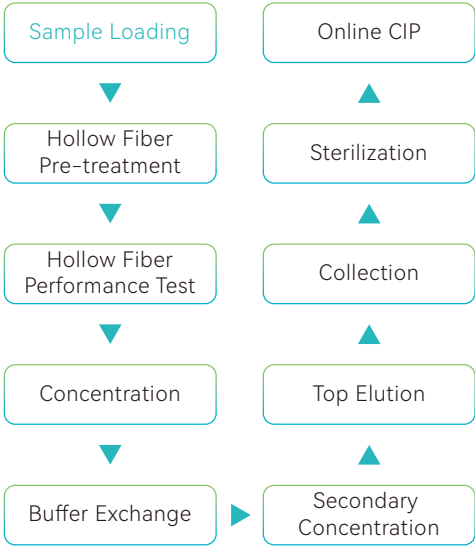


● PROCESS FLOW

Software System Interfaces: Main Interface, Process Control, Parameter Setting, Historical Trends, Alarm Parameters, TMP Optimization, Formulas and Operation Logs, users can seamlessly switch between different interfaces with a single click.



The process control section is divided into 10 main steps, allowing users to combine different method modules to meet process requirements.



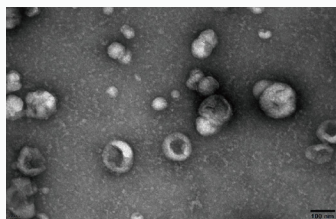
● SPECIFICATIONS

Item	Specification
Dimensions (W*H*D)	518mm * 1015mm * 834mm
Footprint	0.6m*2m
Total Weight	~123kg
Main Unit Weight	~60kg
Power	AC220V
Consumption	2kW
Temperature Control Range	4°C-25°C
Temperature Control Chamber Dimensions(W*H*D)	472mm*781mm*563mm
Processing Volume	2-10L (Recommended: 5-10L)
Peristaltic Pump Flow Rate	5-2200mL/min
Pressure Sensor	0-60psi
Intermediate Product Load Cell	0-15Kg, accuracy 2g
Waste Liquid Load Cell	0-70Kg, accuracy 4g
Ambient Temperature	3°C-45°C

## ● PERFORMANCE

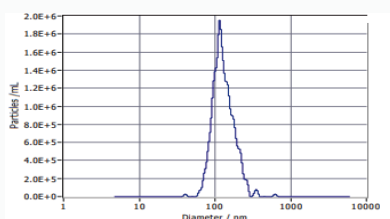
Inspection Items	Inspection Standards
Transmission Electron Microscope (TEM)	Saucer-shaped
WesternBlot	Surface markers CD9, CD63, CD81 show positive results, Calnexin shows negative results
Nanoparticle Tracking Analysis (NTA)	Particle size distribution is concentrated between 30-150nm
Mycoplasma	Negative
Sterility Test	Negative
pH	Meets specific application requirements
Osmolality	Meets specific application requirements

TEM



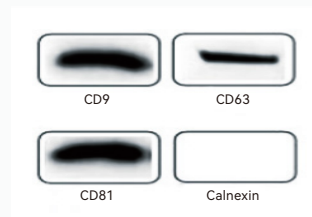
Morphology: exosomes exhibit a "saucer-like" appearance under an electron microscope

NTA



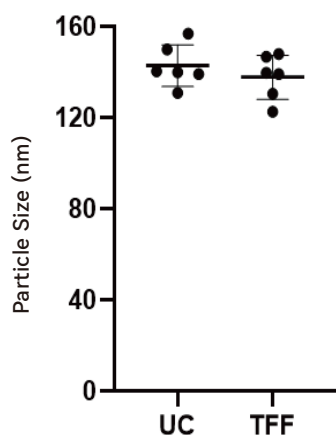
Particle size: exosomes are typically concentrated in a distribution ranging from 30 to 150 nanometers in diameter.

WesternBlot

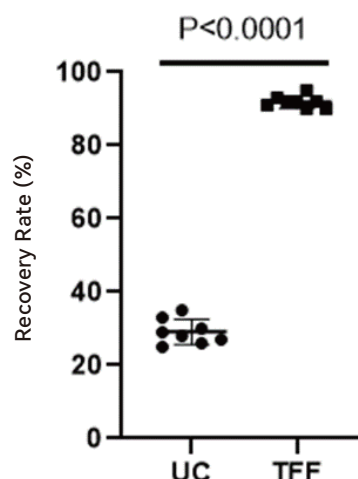


Markers: CD9, CD63, and CD81 show positive results, while Calnexin shows a negative result.

## Comparison between tangential flow filtration (TFF) and ultracentrifugation (UC)



The particle size distribution of exosomes isolated using TFF and UC is similar.



TFF show higher recovery rate than UC

\* Ultracentrifugation is currently considered the gold standard for exosome isolation in the research field.

● PRODUCT SERIES

Product	Specifications	P/N
DASEA® Regenbio automated exosome collection device		
Automated exosome collection device	10L	aColl-10-EXO
Hollow fiber column	10L	aColl-10-HF
Disposable consumable kit	10L	aColl-10-CS

Exosome One-Stop Service

Categories	Projects	Turnaround Time	Sample	Shipping Conditions
Identification	NTA	2 working days	2mL	Biological samples should avoid repeated freezing and thawing. If they can arrive on the same day or the next day, use ice packs. Otherwise, please use dry ice.
	TEM	15 working days	1mL, Concentration >1.0E+11Particles/mL	
	Protein identification	7 working days	500μL, Concentration >1.0E+11Particles/mL, Purity>1.0E+07Particles/μg	
Content	BCA	2 working days	1mL	
Residue	Microcarrier residuals	5 working days	1mL	
Microorganisms	Sterility testing	18 working days	15mL	
	Microbial limit testing	10 working days	3mL	
	Endotoxin testing	5 working days	2mL	
	Mycoplasma testing	2 working days	1mL	
Others	pH and conductivity	2 working days	3mL	
	Osmolality	2 working days	1mL	

## Empowering the Cell Manufacturing with DASEA® Technology Make Regeneration Clinically Accessible and Affordable



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