

Large-Scale Nanoparticle Purification, Streamlined.

Moving from mL to L shouldn't mean
reinventing your workflow.



The qEV Isolation Platform

Built for Large-Scale Bioprocess Development and Optimisation

Bioprocessing

Extracellular Vesicles

Lipid Nanoparticles

Pilot Studies

Large-Volume Workflows

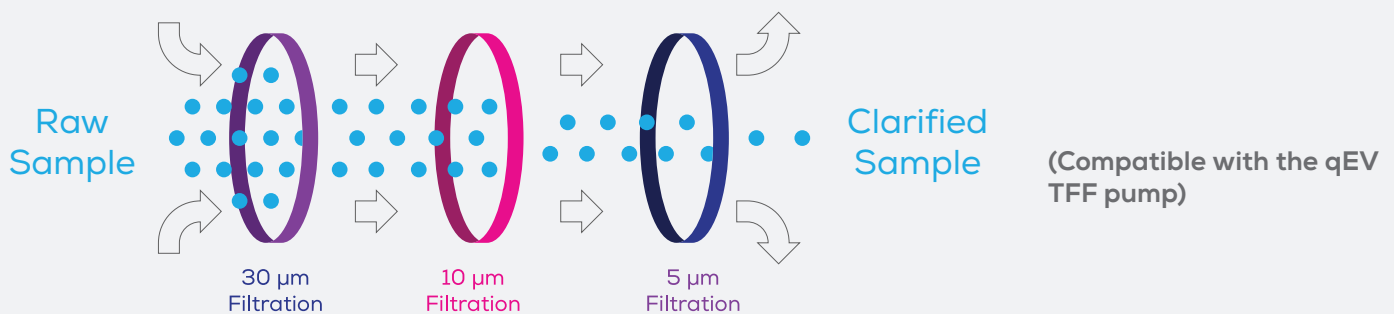
More

- ▶ The qEV Isolation platform delivers high-purity nanoparticle isolates across diverse biofluids. At the core, are qEV columns – proven to deliver superior isolate purity through gentle, efficient, and reproducible size exclusion chromatography.
- ▶ Access hands-on support from our experienced bioprocessing team, from custom column production to automated chromatography and the qEV Tangential Flow Filtration system for a complete workflow.
- ▶ Achieve compliance with cGMP-ready columns and instrumentation designed to meet regulatory requirements.

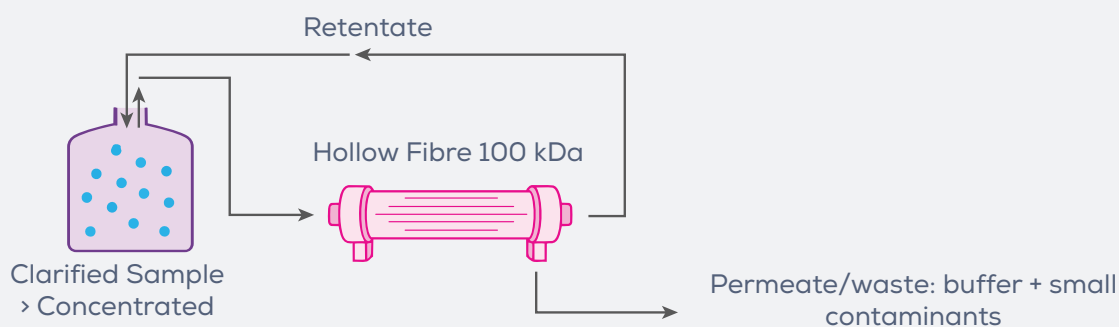
Bioprocessing from Raw Sample to Purified Isolate

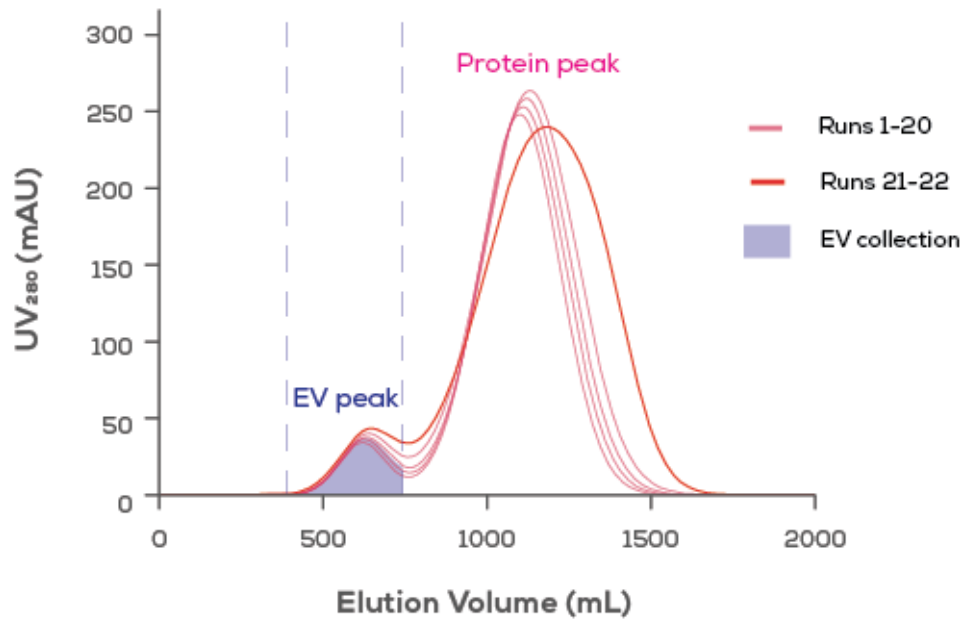
With our single-particle analytical platforms available to guide every step

1. Pre-processing clarification: sequential filtration



2. Concentration via the qEV TFF system





Reproducible large-scale separation of EVs from protein in cell culture media (220 mL) by qEV Isolation. UV₂₈₀ elution profiles were stable for 20 runs on a customised large-scale qEV column, run by the qEV Zenco. An early-eluting EV peak and a later-eluting protein peak were consistently resolved across all runs.

3. qEV Purification run by automation



4. Optional Post-SEC concentration (qEV TFF)



Scale Your Isolation Workflow with the qEV Zenco

Automated Chromatography, Built for qEV

The qEV Zenco is an automated chromatography system built specifically for qEV columns. With programmable workflows, real-time monitoring, and an intuitive interface, it delivers consistent, high-quality purification with minimal hands-on time.

Designed for Scale and Control

- ▶ Automated fraction collection
- ▶ Real-time monitoring and workflow visualisation
- ▶ Low dead volume to minimise sample loss
- ▶ Flexible configuration for different sample types and volumes

Achieve cGMP Compliance with the qEV Zenco Pro

The qEV Zenco is available in two configurations. The Pro model is built for cGMP environments and regulated workflows, with features designed to support compliance requirements such as audit trails and data integrity.

Column Compatibility

- ▶ qEV2
- ▶ qEV10
- ▶ qEV100
- ▶ Larger custom columns



qEV Zenco Specifications

	qEV Zenco Standard	qEV Zenco Pro	
Flowpath			
	8 inlets / 8 outlets	Same as Standard	
	Column bypass and reverse flow	Same as Standard	
Detection			
UV	190–400 nm (± 1 nm accuracy)	2 x 190–400 nm (± 1 nm accuracy)	
pH	0–13 (± 0.1 accuracy)	0–14 (± 0.1 accuracy for pH 1–13)	
Conductivity	0–999 mS/cm (0–200mS/cm ± 2% accuracy)	Same as Standard	
Pump & Pressure			
Pump	1 x in-line piston pump	2 x peristaltic pumps (not in contact with fluids)	
Max flow rate	100 mL/min (± 1.5% accuracy)	100 mL/min (± 2% accuracy)	
Max pressure	10 bar	2 bar	
Software & Data			
	Real-time workflow visualisation	As per Standard, with software compliant with 21 CFR Part 11 requirements.	
	CSV outputs including: Sample ID, column info, fraction data Retention time, UV vs volume Column efficiency metrics (plates, asymmetry, peak height)		
Physical			
	390 x 480 x 390 mm 35 kg		380 x 513 x 430 mm 52 kg
	Powder-coated finish, wipe-clean drip tray	Stainless steel	
		Touch-screen display 13"	

Scale Particle Purification with the qEV TFF System

The qEV TFF System reduces sample volume, supports larger-scale purification, and enables gentle buffer exchange – combine it upstream or downstream of qEV isolation for a complete workflow.

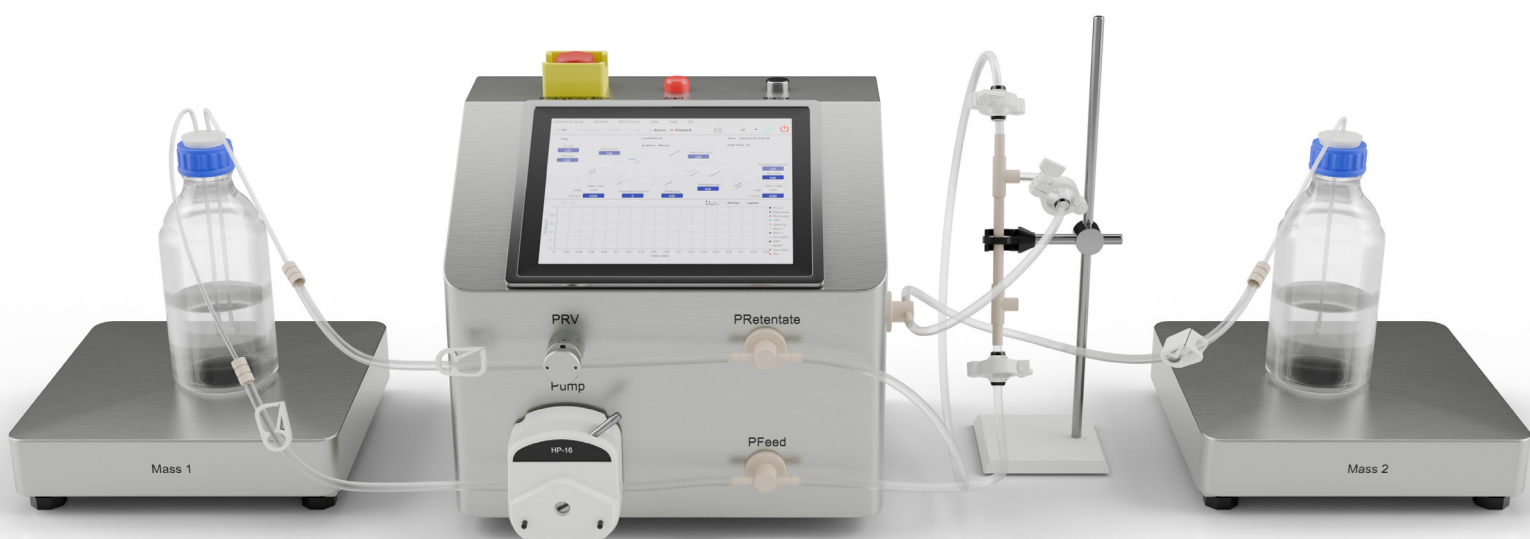
qEV TFF technical specs

Key Capabilities

- ▶ Process up to 20 L input volume
- ▶ Compatible with hollow fibre and cassette membranes
- ▶ 10-750 kDa membrane range

Monitoring and Control

- ▶ Peristaltic pump: 0.14-1.5 L/min flow rate
- ▶ Real-time display of transmembrane pressure (TMP) and operational parameters
- ▶ Pressure alarms



Prepare for Clinical Translation with GMP-ready qEV columns

GMP-ready qEV columns can be produced on request, with each batch subject to rigorous quality control and defined criteria for batch release.

- ▶ Manufactured in an environmentally controlled cleanroom workspace, with enhanced aseptic protocols and additional cleaning procedures
- ▶ Rigorous batch-release quality control with strict bioburden and endotoxin targets
- ▶ Full process transparency via a downloadable Regulatory Support File

Let Single-Particle Analysis Be Your Guide

Validate and optimise your workflow with single-particle analysis.

- ▶ Get in-depth insights into elution profiles, sample purity, and particle size distribution with high-resolution size and concentration measurements
- ▶ Measure zeta potential for stability studies during process optimisation
- ▶ Talk to the team about whether Tunable Resistive Pulse Sensing or Nanopore Pulse Sensing is best for you



Ready to Scale?

Whether you're optimising in the lab or ready to scale, Izon's integrated qEV platform delivers reliable, high-quality nanoparticle purification at every stage.

Talk to our team: tell us about your workflow and we'll help you find the right configuration.

