

Advancing Sensitive Bioprocessing with Acoustophoresis

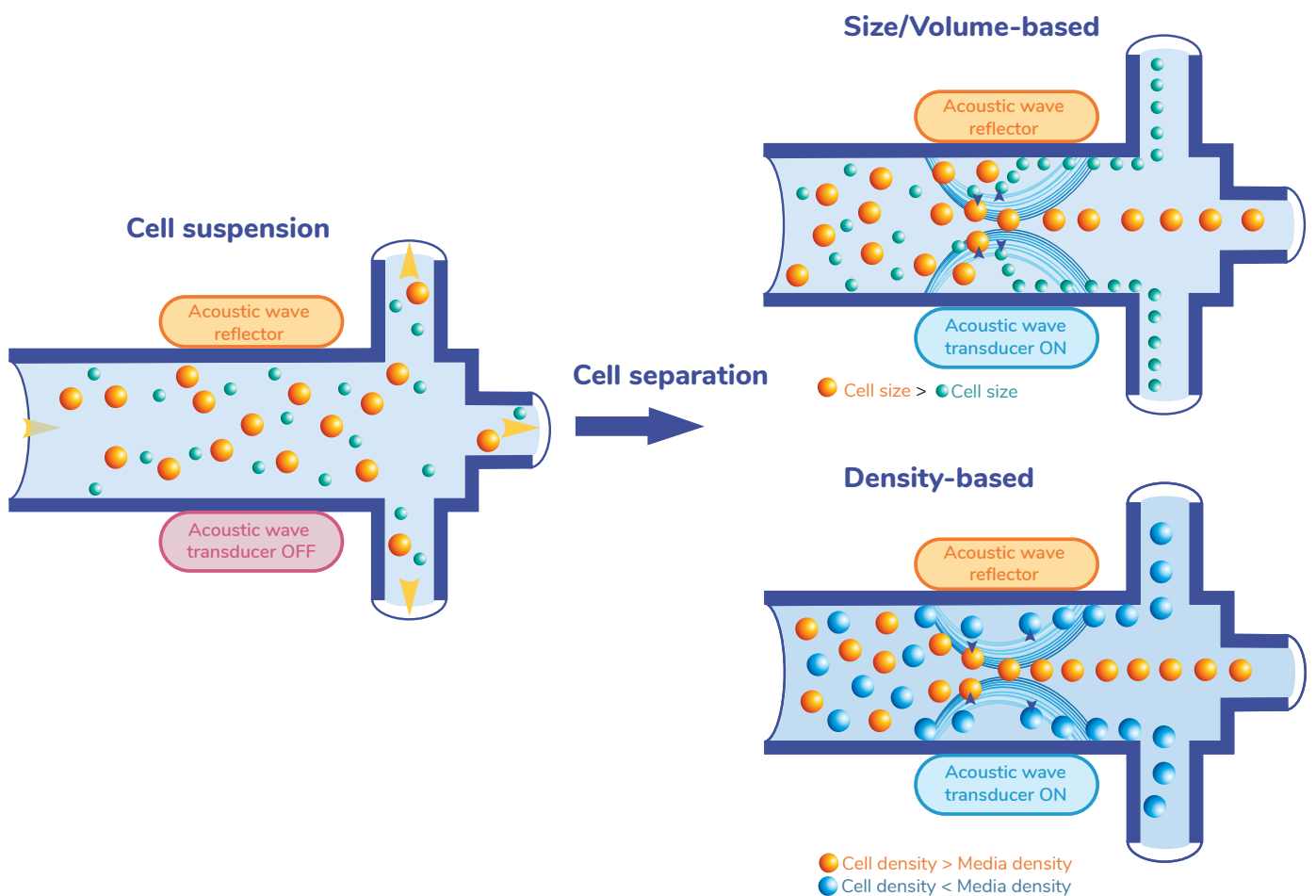
Non-Invasive, Gentle, and Effective Cell Handling Technology

Aenitis approach

Using acoustophoresis for the biophysical separation of cells in suspension within continuous flow

How it works

When acoustic waves interact with an object in suspension, they exert a force known as the acoustic radiation force. The direction and magnitude of this force are influenced by factors such as the properties of the acoustic wave, as well as the physical properties of the object (e.g., size, density, shape) and medium characteristics. This force levitates cells and particles, causing them to move at varying speeds or along different trajectories.



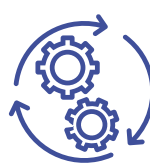
Acoustic Cell Handling Technology is a gentle and contactless method that eliminates mechanical stress on cells, ensuring minimal disruption.

It is designed for a range of cell processing applications:

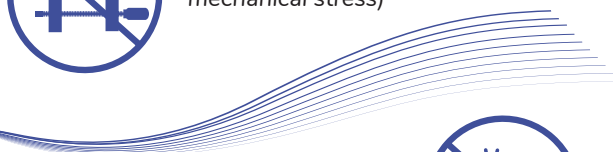
- Washing
- Concentration
- Rare cell isolation
- Sorting



Non-invasive and gentle
(Contactless handling with minimal mechanical stress)



Operates in continuous flow
(Processing millions of cells per minute)



Fully closed
(Sterile with no external contact)



GMP-Compliant
(IQ, OQ, PQ support provided)

Case Studies

Non exhaustive application type	Cell types	Initial concentration	Initial volume	Flow rate*	Final concentration**	Final volume	Cell viability
Concentration	Jurkat	3×10^6 cells/mL	1 L	33 mL/min	300×10^6 cells/mL	8 mL	92%
	Platelets	500×10^3 cells/ μ L	350 mL	33 mL/min	3.5×10^6 cells/ μ L	50 mL	95%
	MSC	30×10^3 cells/mL	300 mL	9 mL/min	84×10^3 cells/mL	50 mL	89%
	NK cells	8×10^6 cells/mL	100 mL	15 mL/min	18×10^6 cells/mL	15 mL	91%

* Possible flow rate : 1 to 40 mL/min

** Recovery : up to 98%

Industrial readiness



3D printed custom consumables

GMP ready in 4 months

Easy to scale-up from 20 mL to any volume



Want to try?
Define your needs
for gentle acoustophoresis cell processing!

- What process would you like to test (Washing, Concentration, Isolation, Sorting, etc.)?
- What is the composition of your initial sample (Cell type, Media, ...)?
- What are the initial and final volumes you work with?
- What is your desired yield and cell recovery?
- What is your expected final cell concentration?
- What are your time constraints?
- What are your current processing methods?
- What type of device are you currently using?
- Why is gentle and contactless cell processing important to you?

CONTACT US



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SCAN ME



At Aenitis,
we use acoustic technology
to advance sensitive bioprocessing

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Acoustic Advanced Bioprocessing