

**SNS COLLEGE OF
PHARMACY
AND HEALTH SCIENCES**
*Affiliated To The Tamil Nadu Dr. MGR Medical University,
Chennai*
Approved by Pharmacy Council of India, New Delhi.
Coimbatore -641035

COURSE NAME : PHARMACEUTICAL ENGINEERING

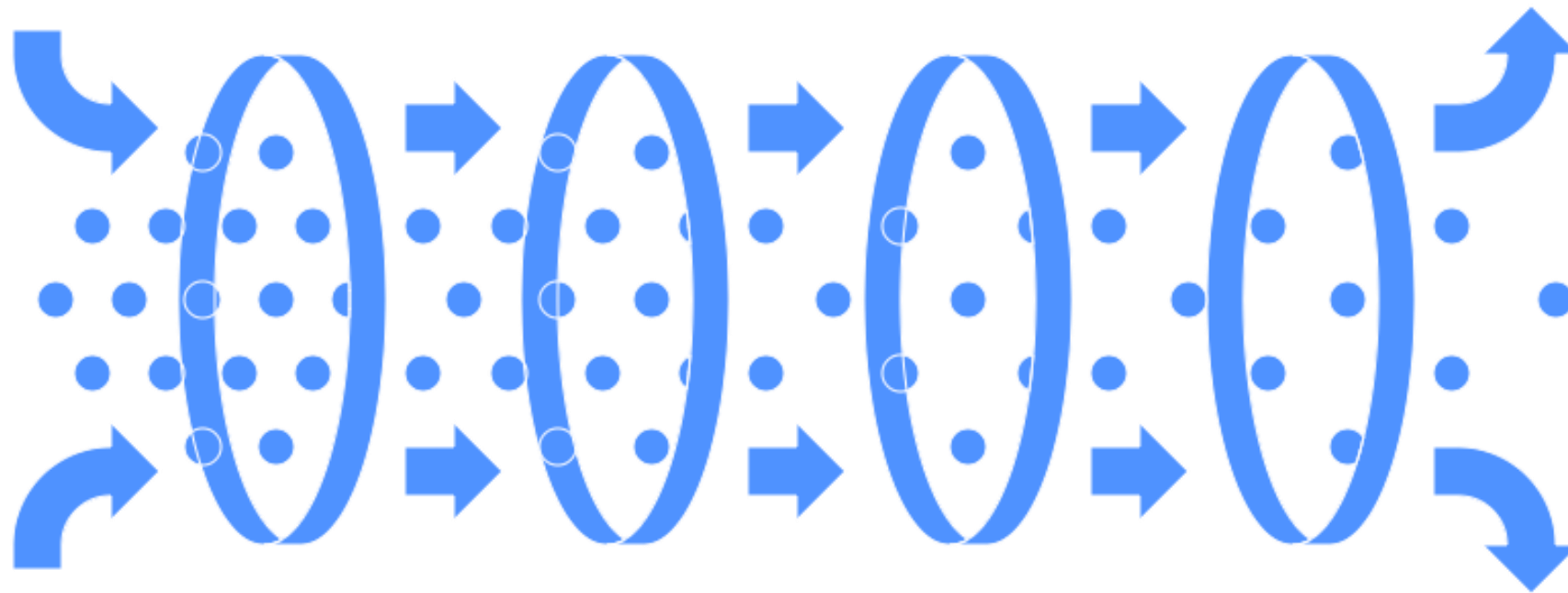
(BP404 T)

III SEM / II YEAR

UNIT 1

SUB TOPIC: size separation

Size Separation Process in Pharmaceuticals



Sieving

Separating particles
using mesh

Cyclone Separation

Using centrifugal
force to separate

Air Separation

Utilizing air currents
for separation

Elutriation

Employing fluid flow
for separation

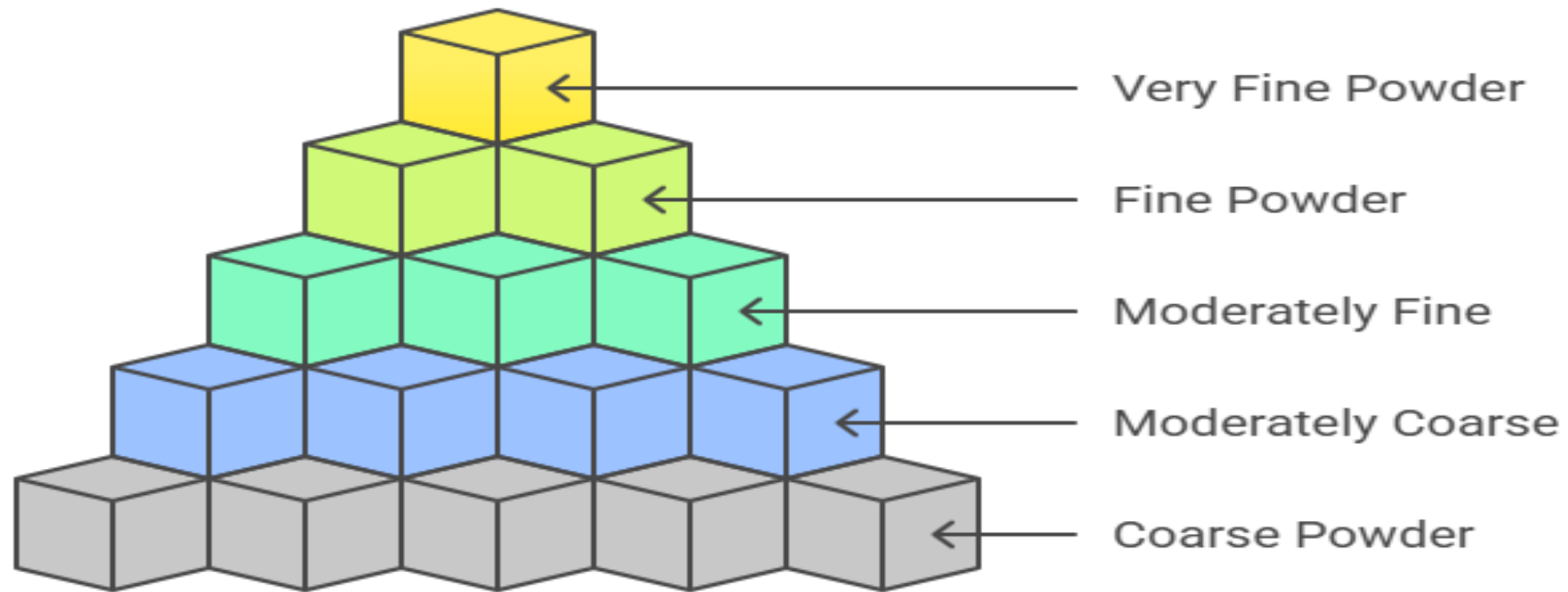
Benefits of Size Separation in Pharmaceutical Production



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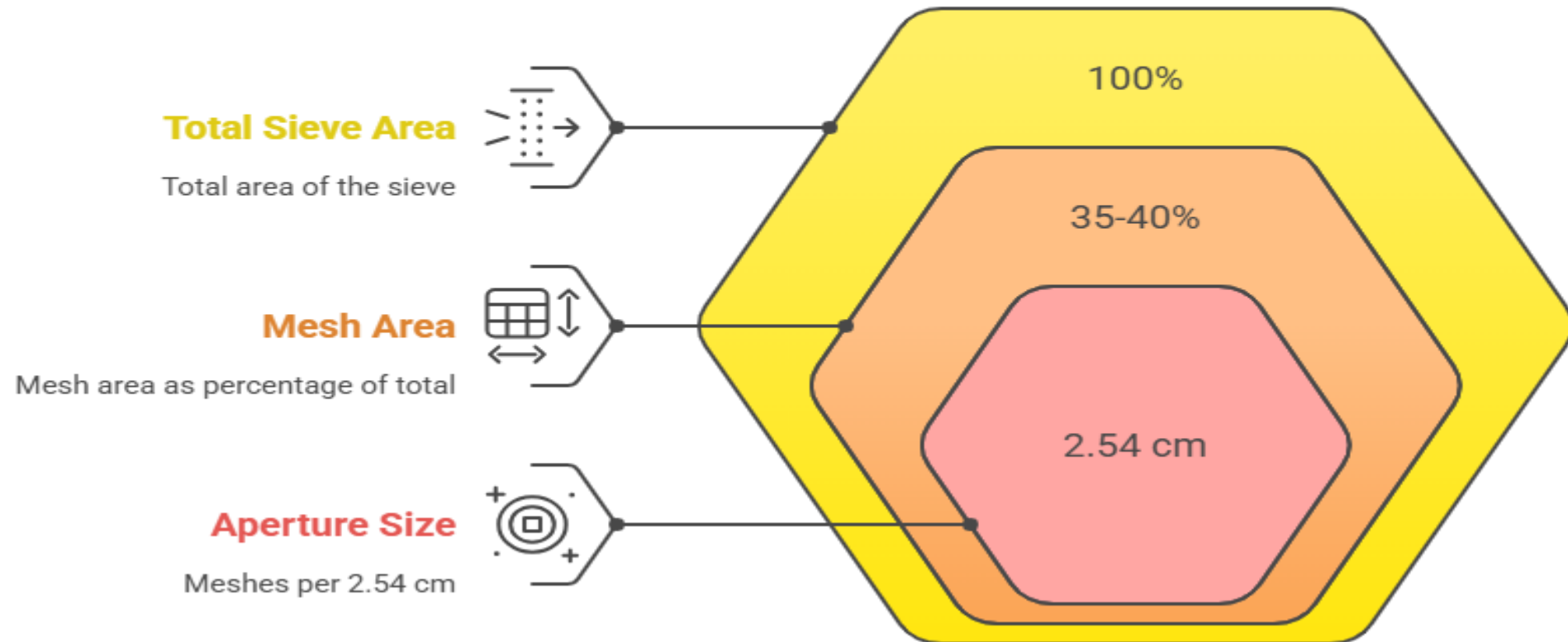
OFFICIAL STANDARDS FOR POWDERS

Pharmaceutical Powder Size Grades



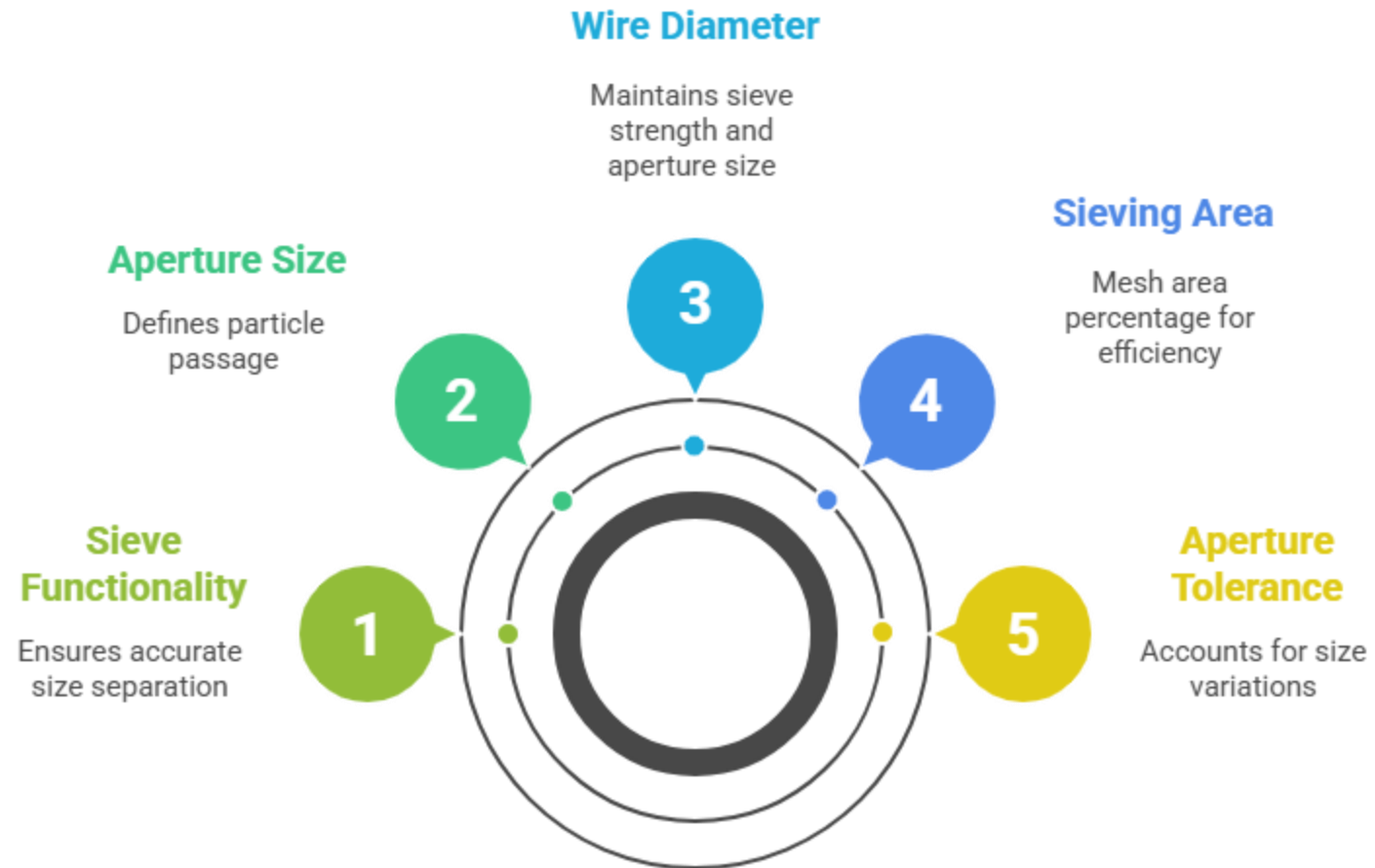
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Sieve Specifications for Pharmaceutical Powders



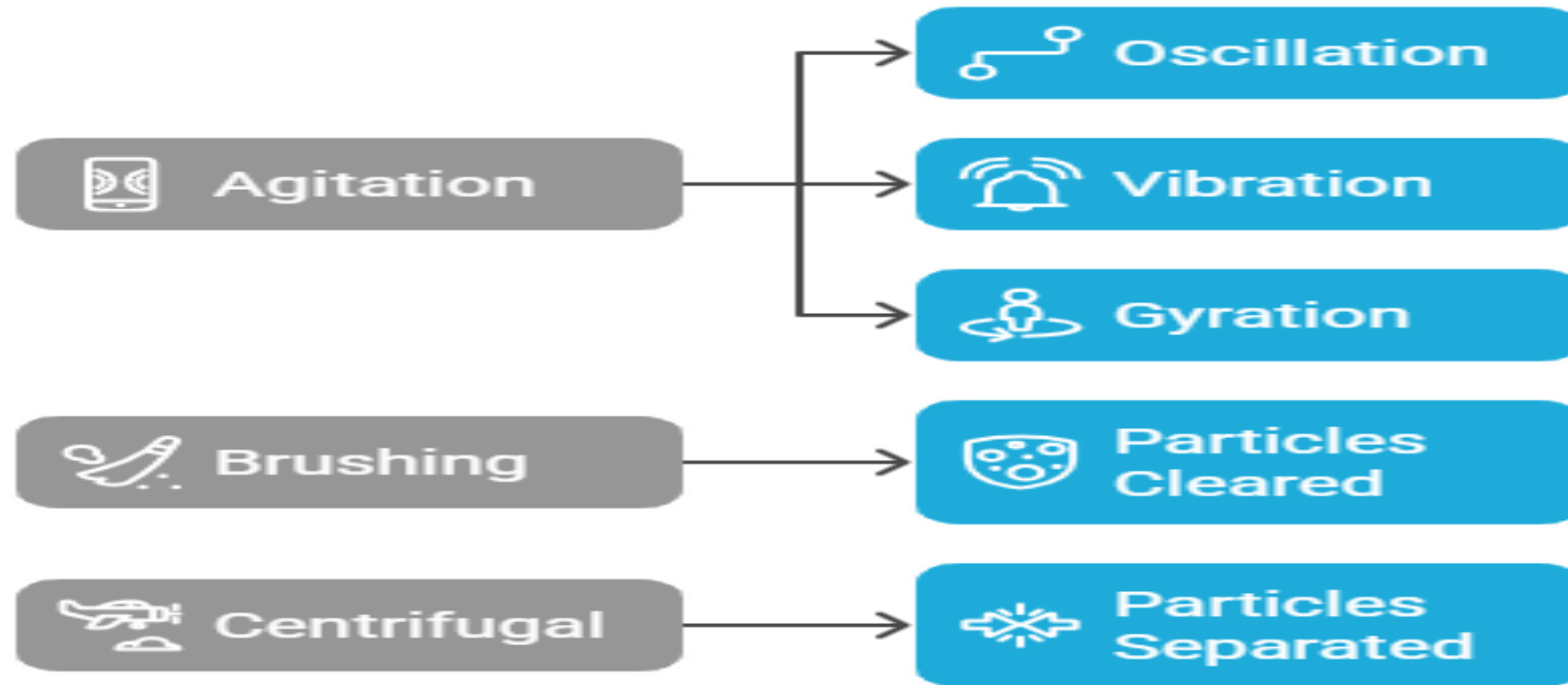
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Sieve Specifications



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Size Separation Methods in Pharmaceutical Powders



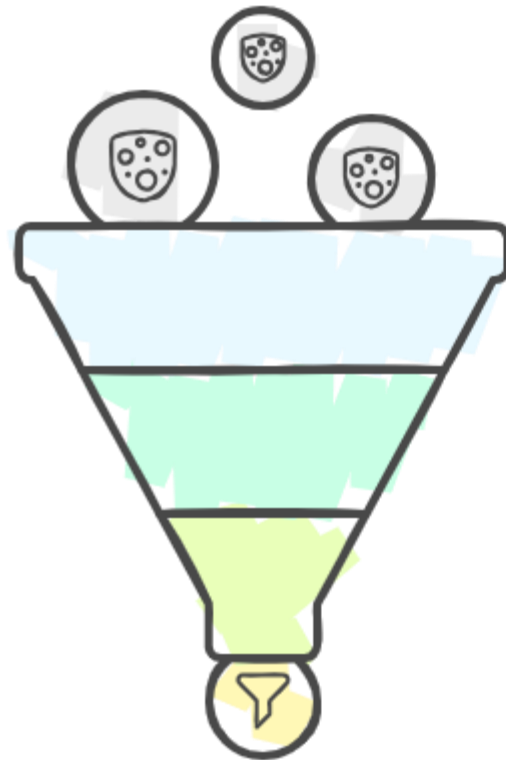
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Sieving Method for Powder Separation



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Powder Size Separation Process



Place in Uppermost Sieve

Material is loaded into the top sieve



Shake Sieves

Sieves are shaken to aid particle movement



Particle Passage

Particles move through sieves based on size

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Cyclone Separator Process



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Solid-Gas Suspension Introduction



Rotary Movement Creation



Fluid Exit



Centrifugal Force Application

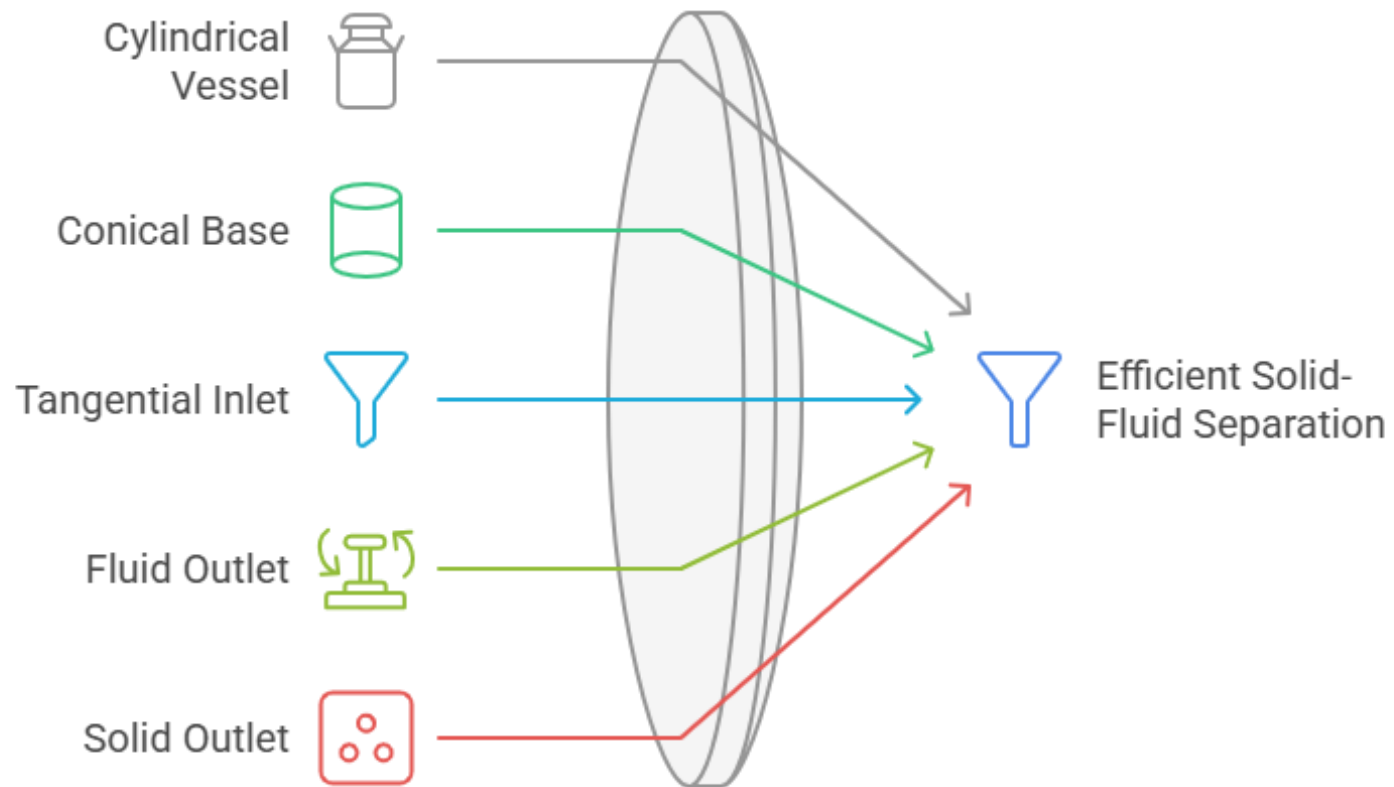


Solids Fall to Base



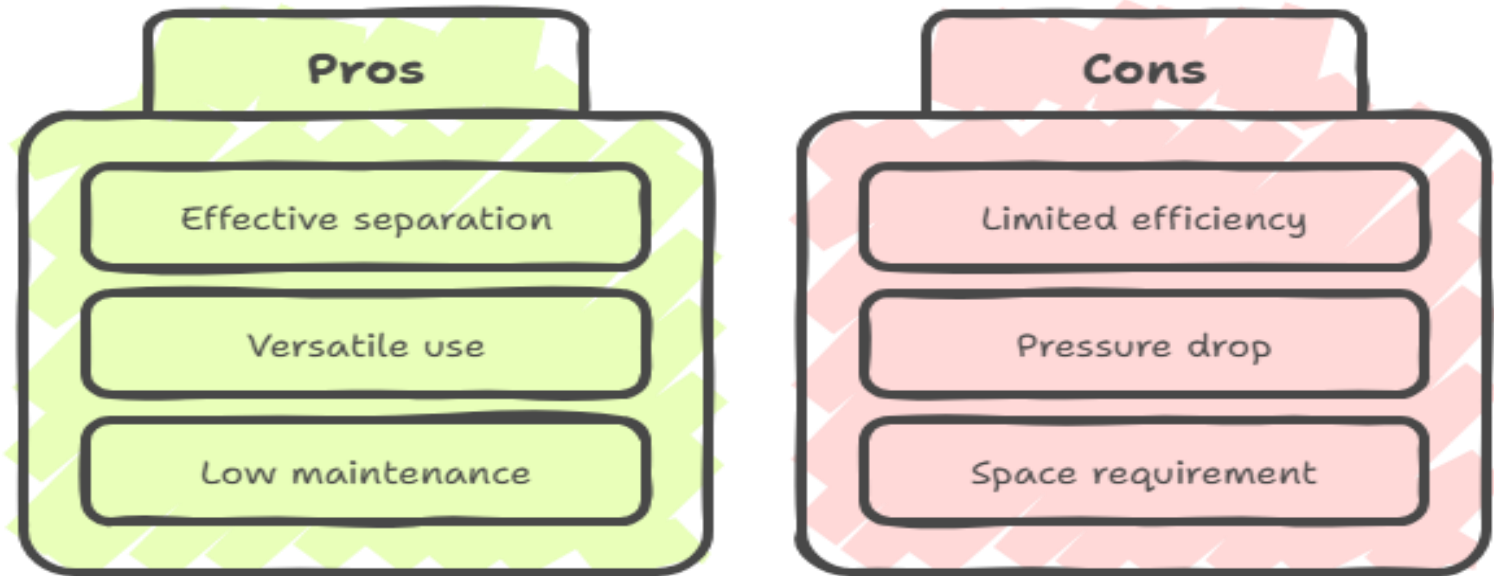
Solids Discharge

Components of a Cyclone Separator



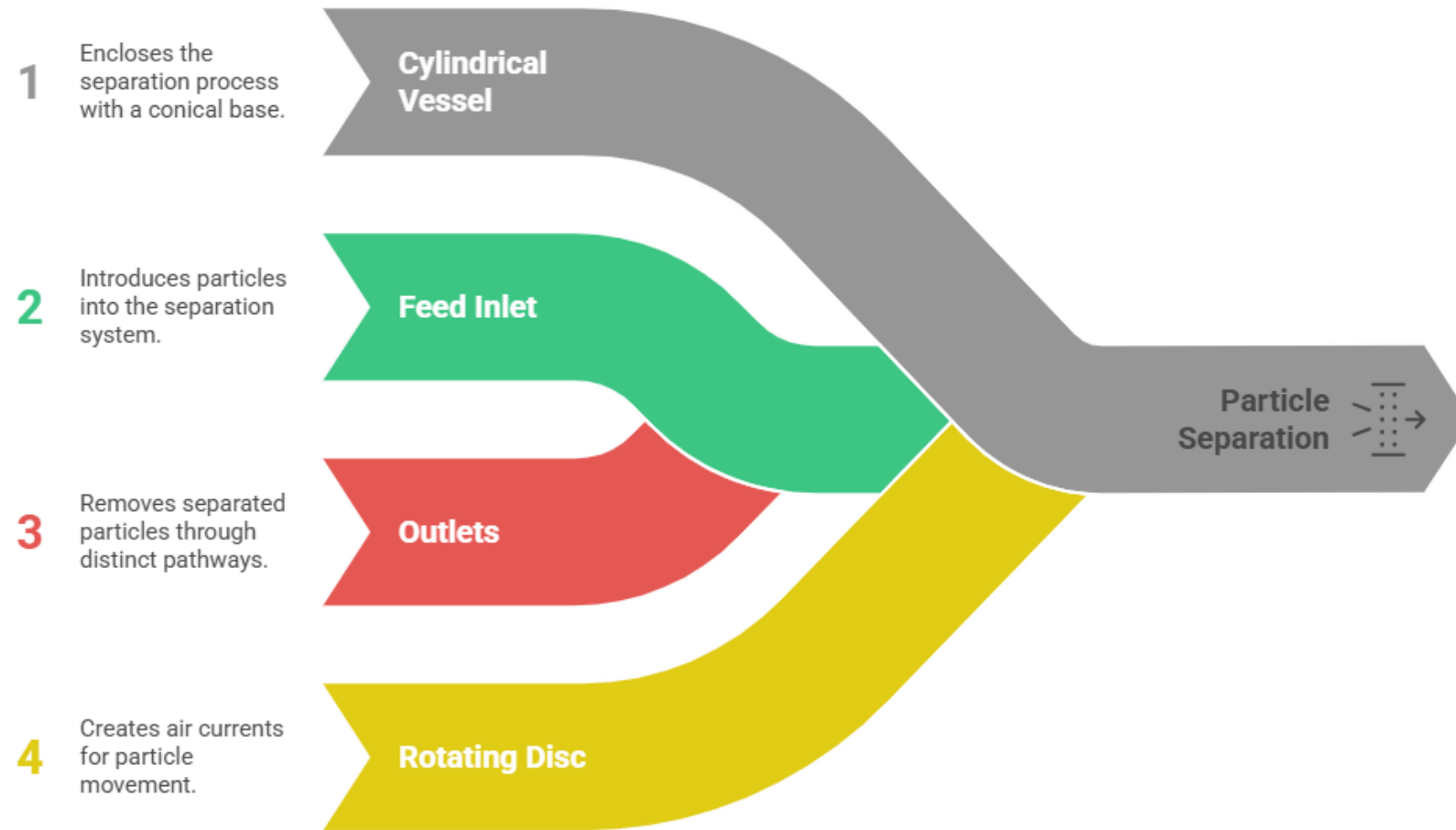
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Cyclone Separators



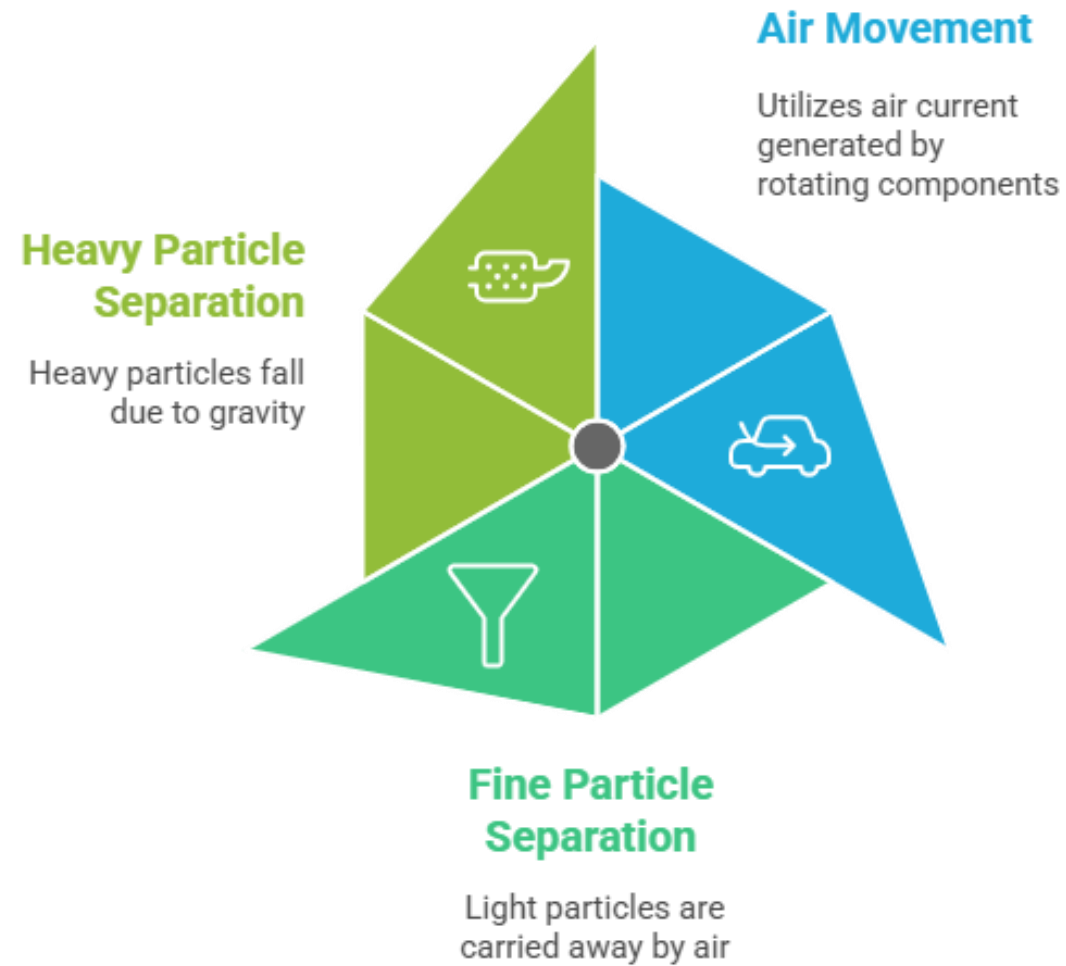
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Air Separator Components



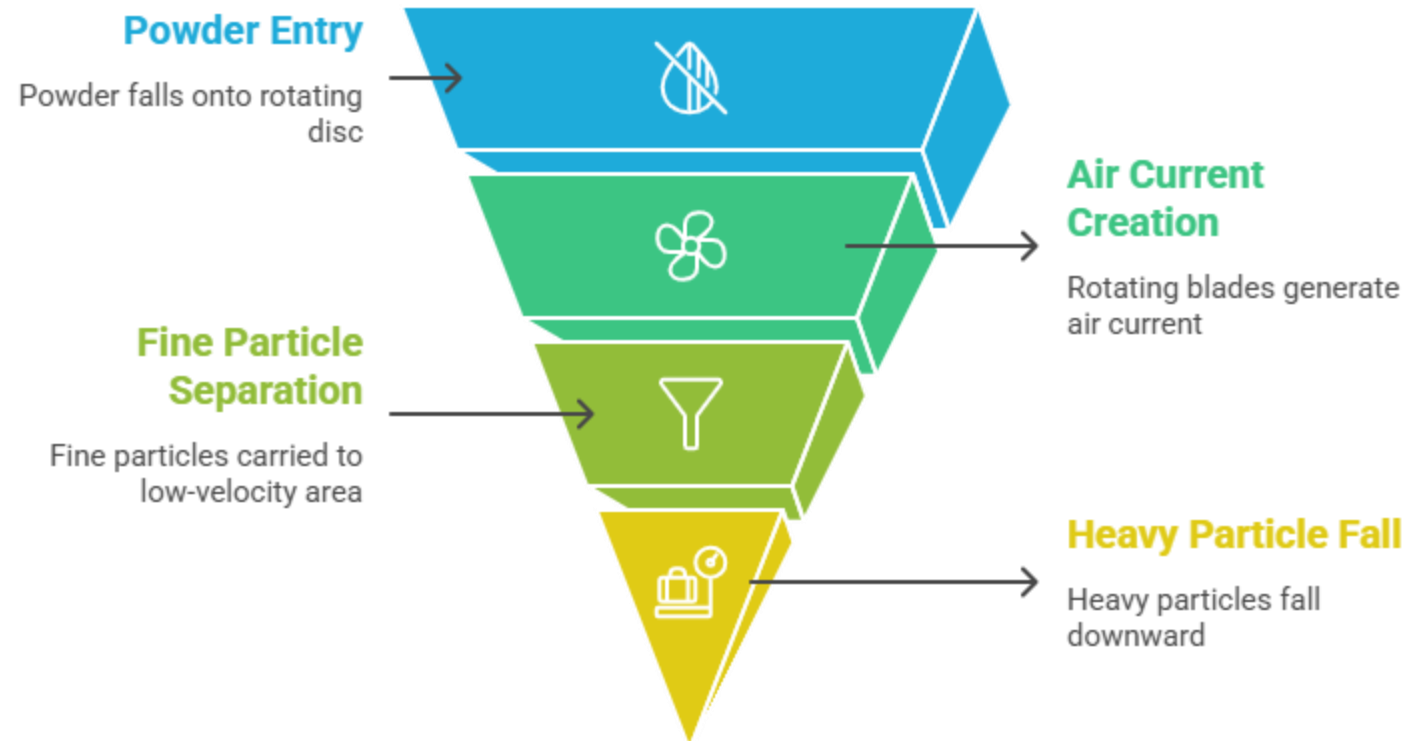
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Air Separator Mechanism



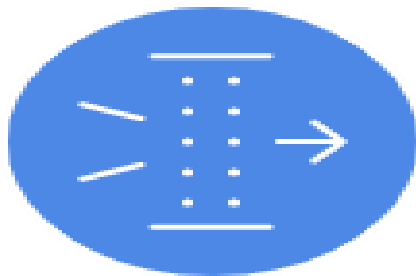
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Air Separation Process



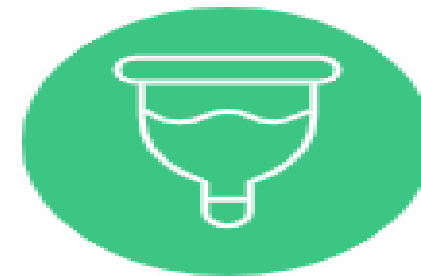
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Choose the appropriate elutriation method for powder separation.



Traditional Elutriation

Separates particles based on settling in a tank

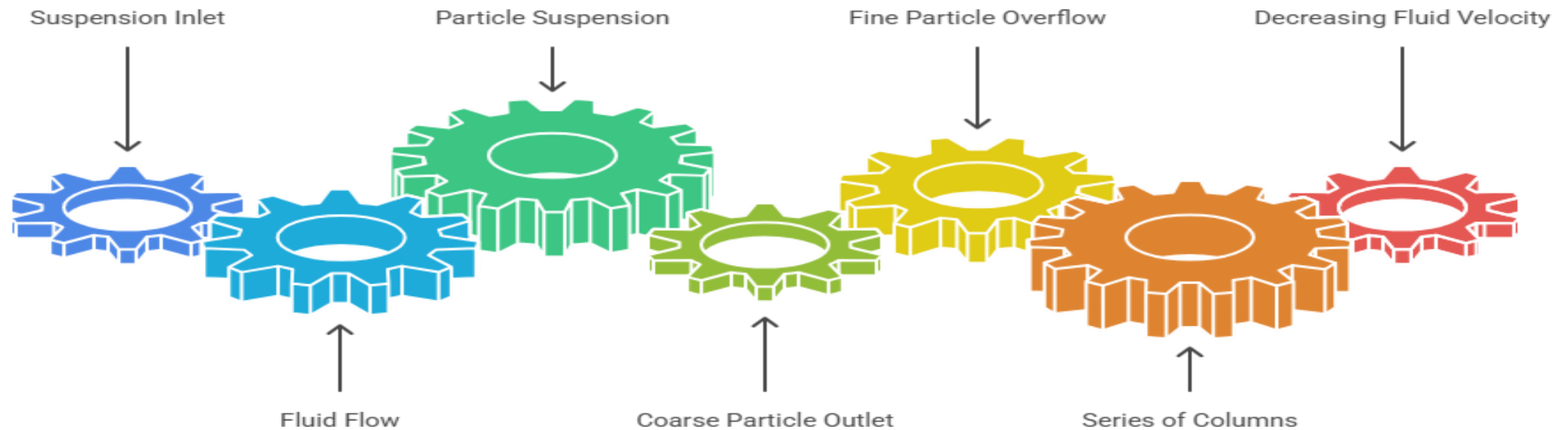


Modern Elutriation

Separates particles using fluid flow in a column

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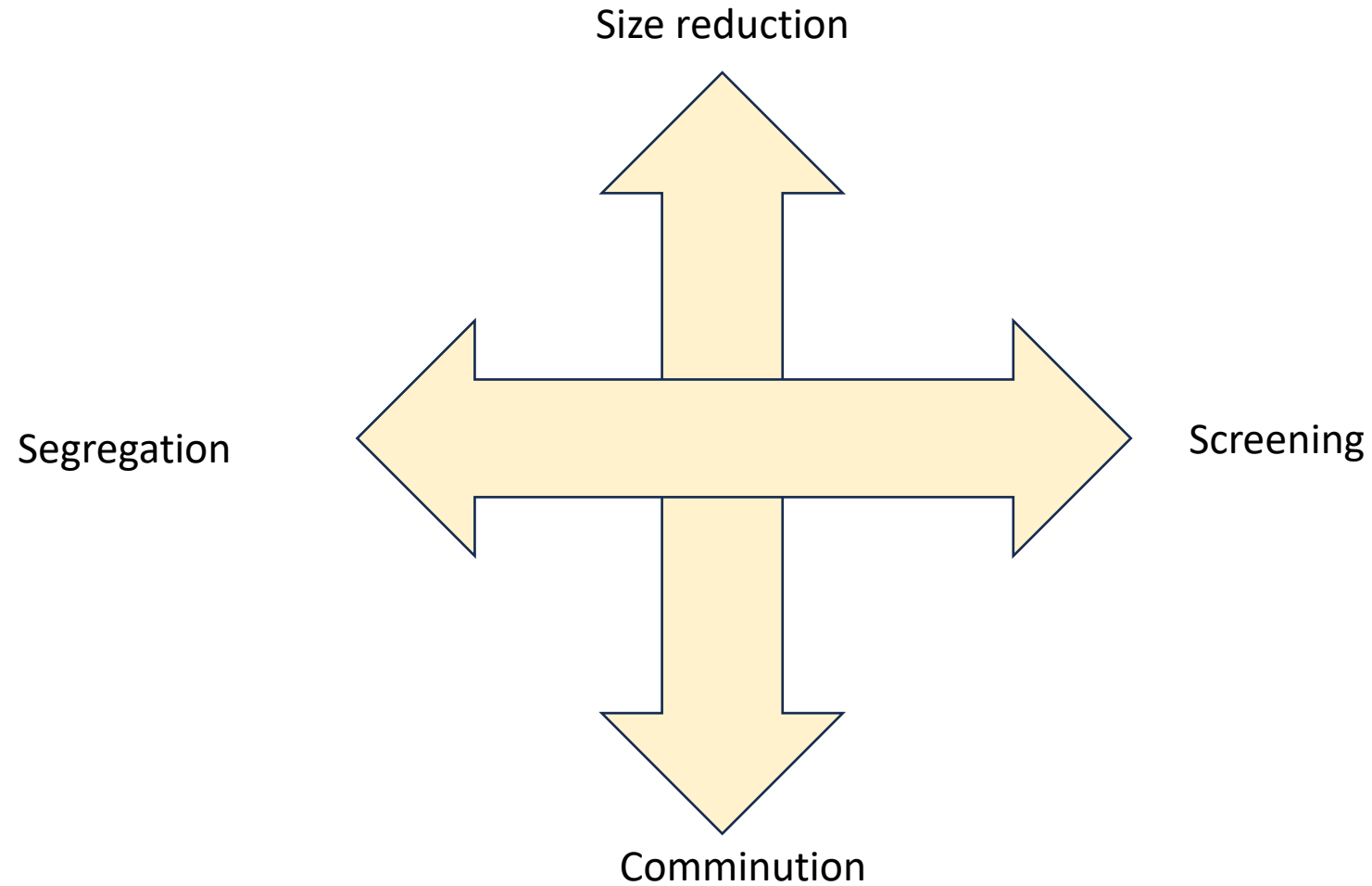
Modern Elutriation Process



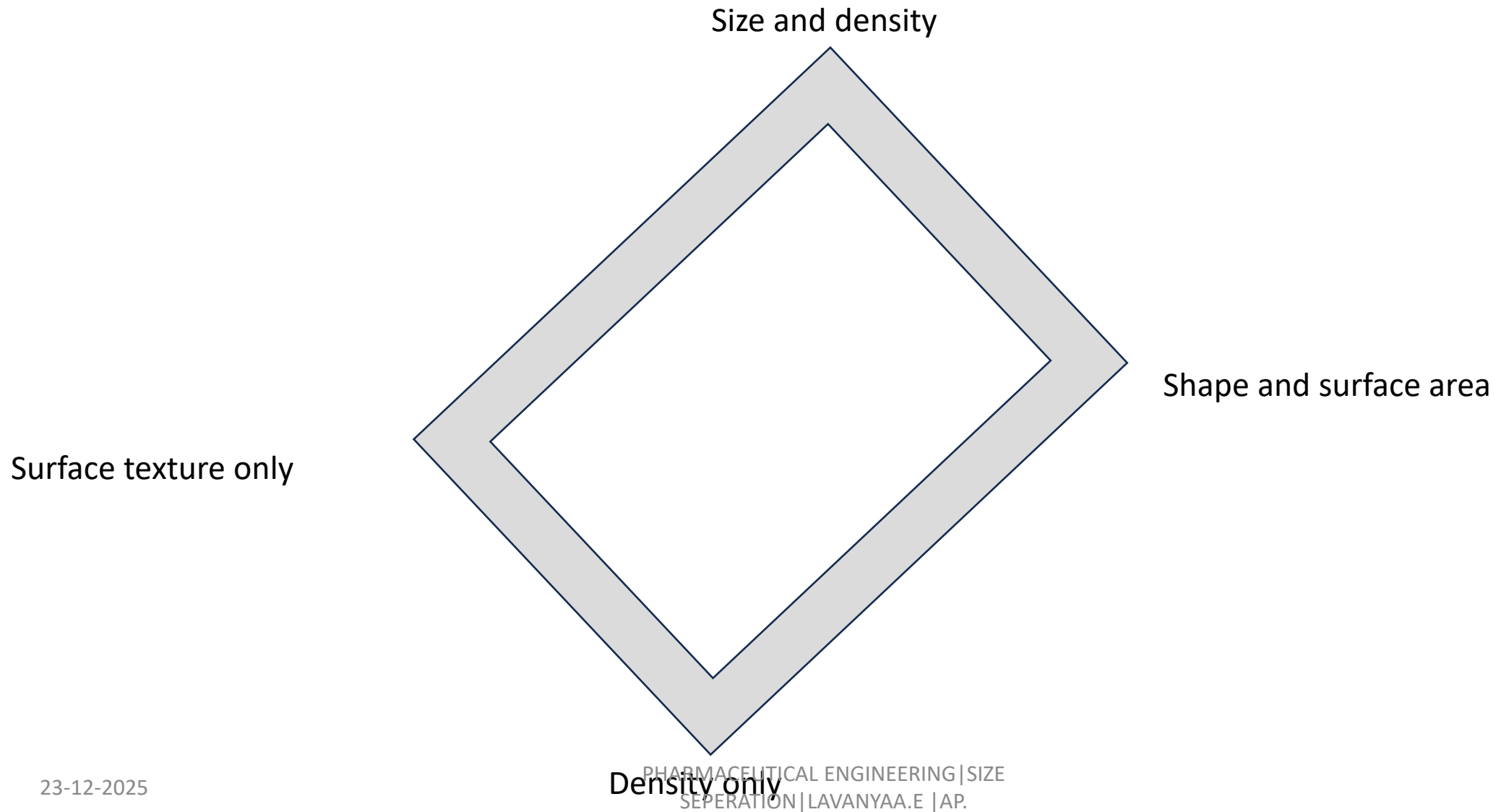
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ASSESSMENTS

Size separation is also known as



In cyclone separator, separation primarily depends on:



THANK YOU