

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

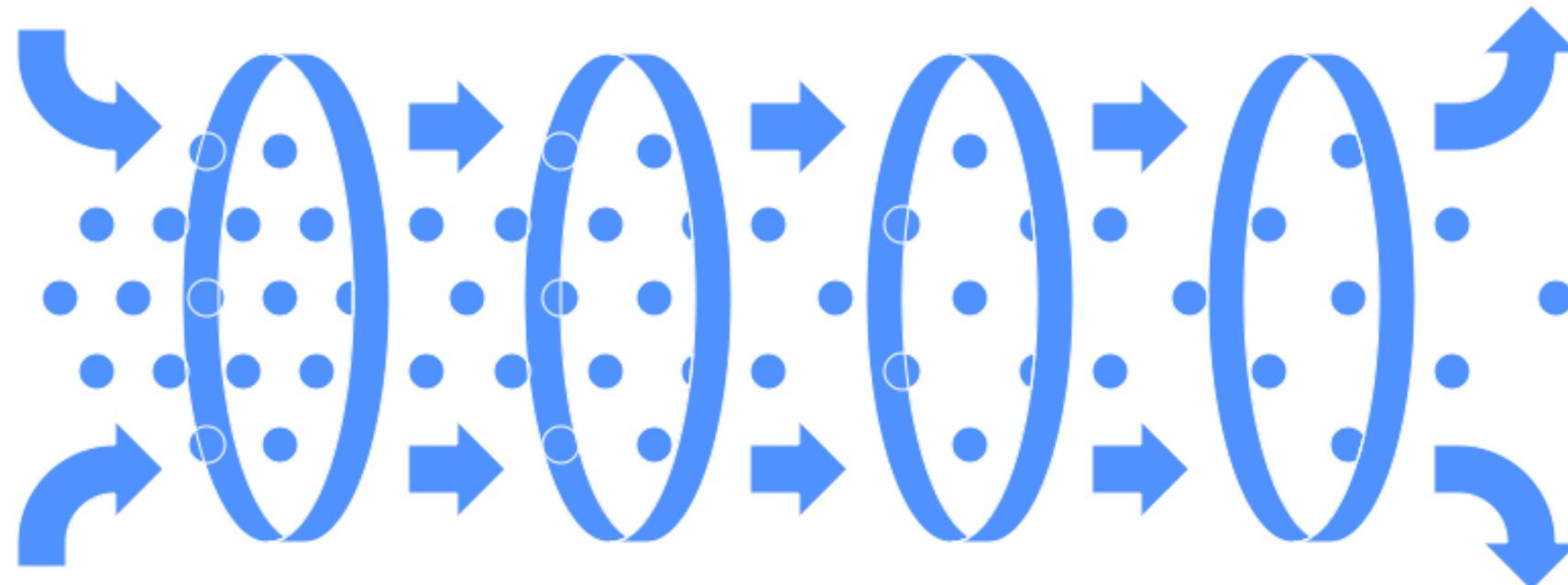
(BP404 T)

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

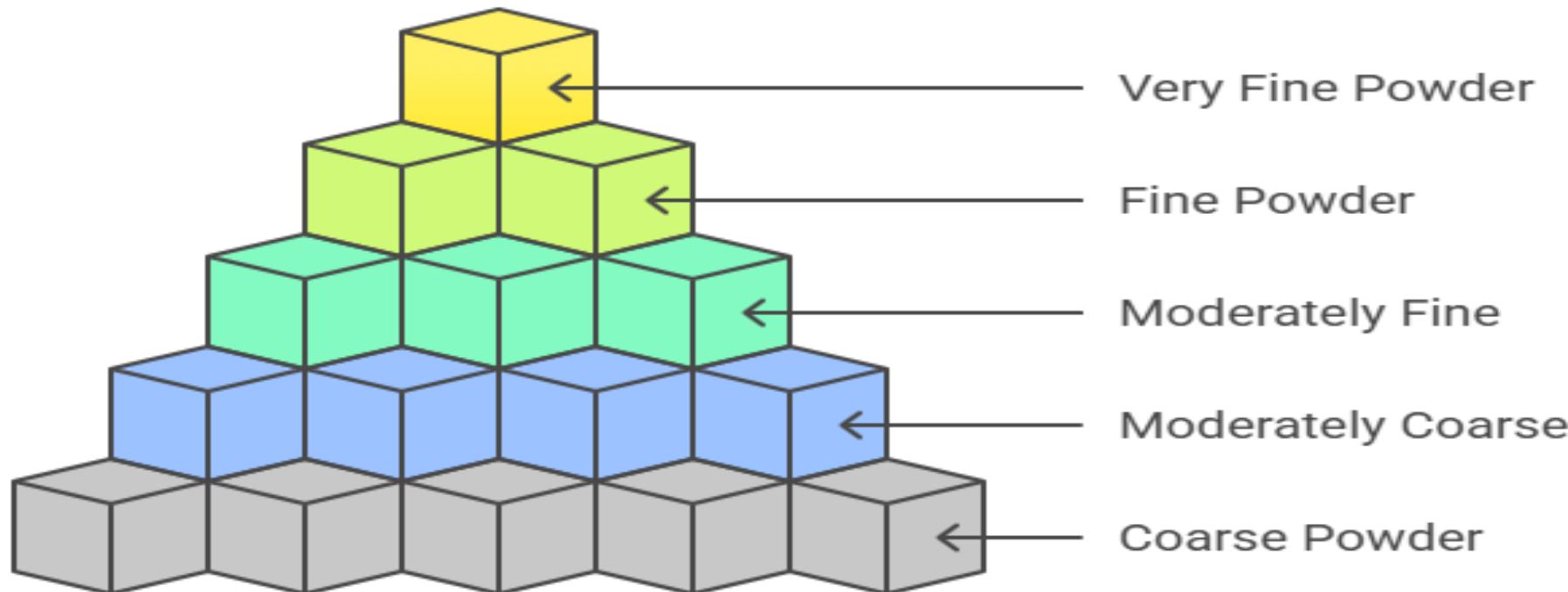
Benefits of Size Separation in Pharmaceutical Production



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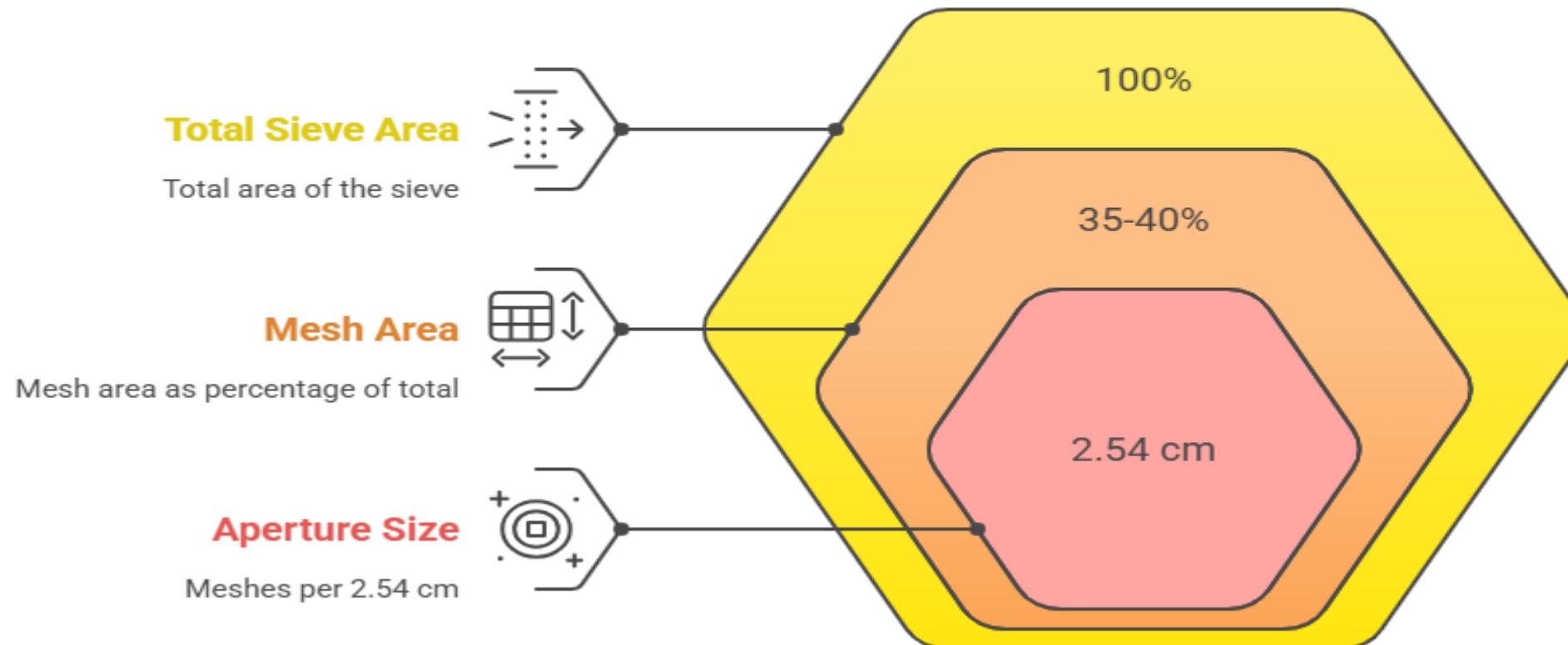
OFFICIAL STANDARDS FOR POWDERS

Pharmaceutical Powder Size Grades



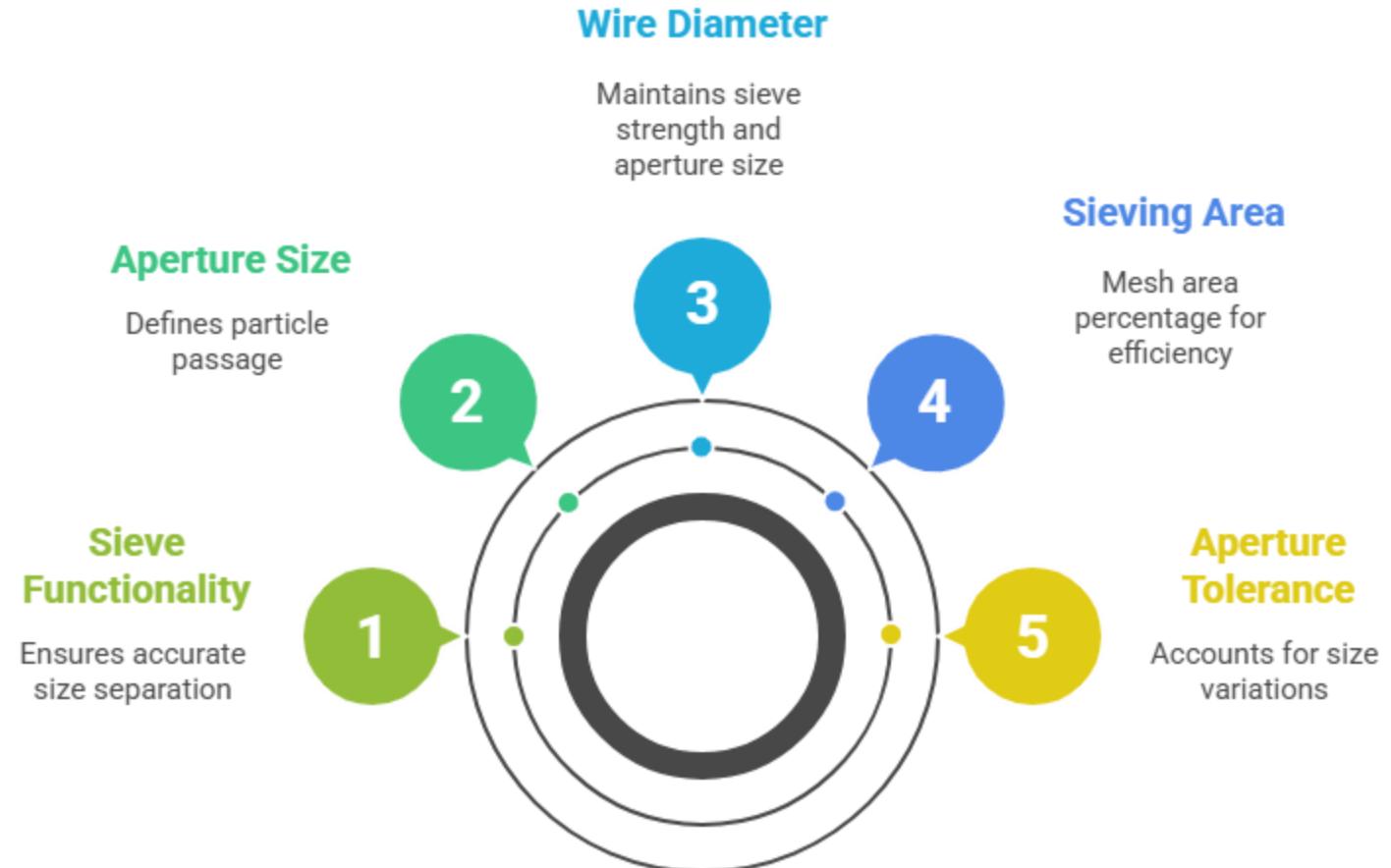
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Sieve Specifications for Pharmaceutical Powders



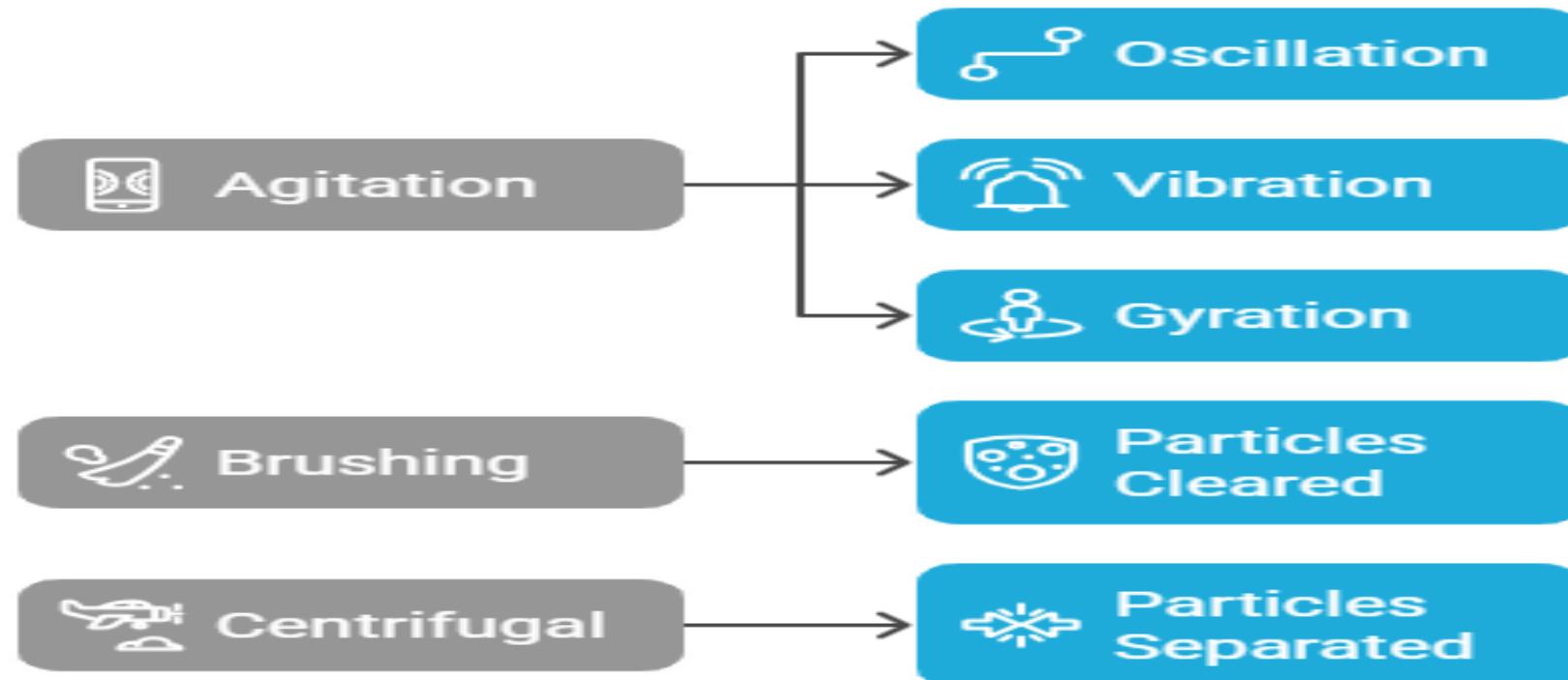
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Sieve Specifications



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Size Separation Methods in Pharmaceutical Powders



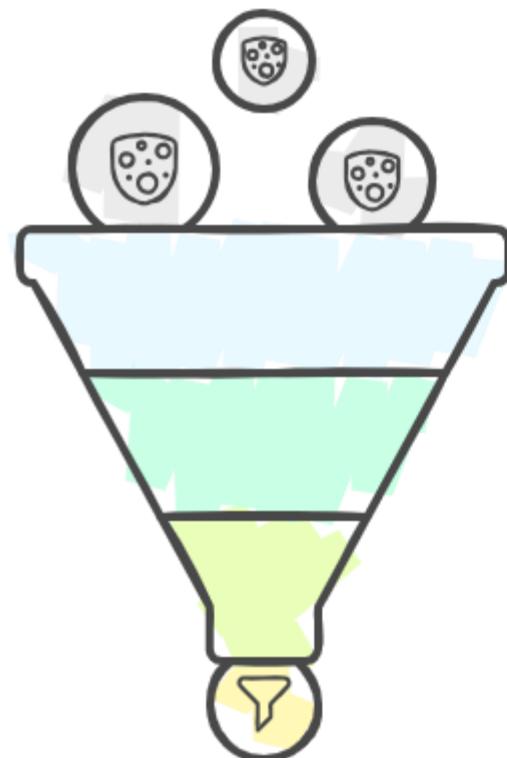
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Sieving Method for Powder Separation



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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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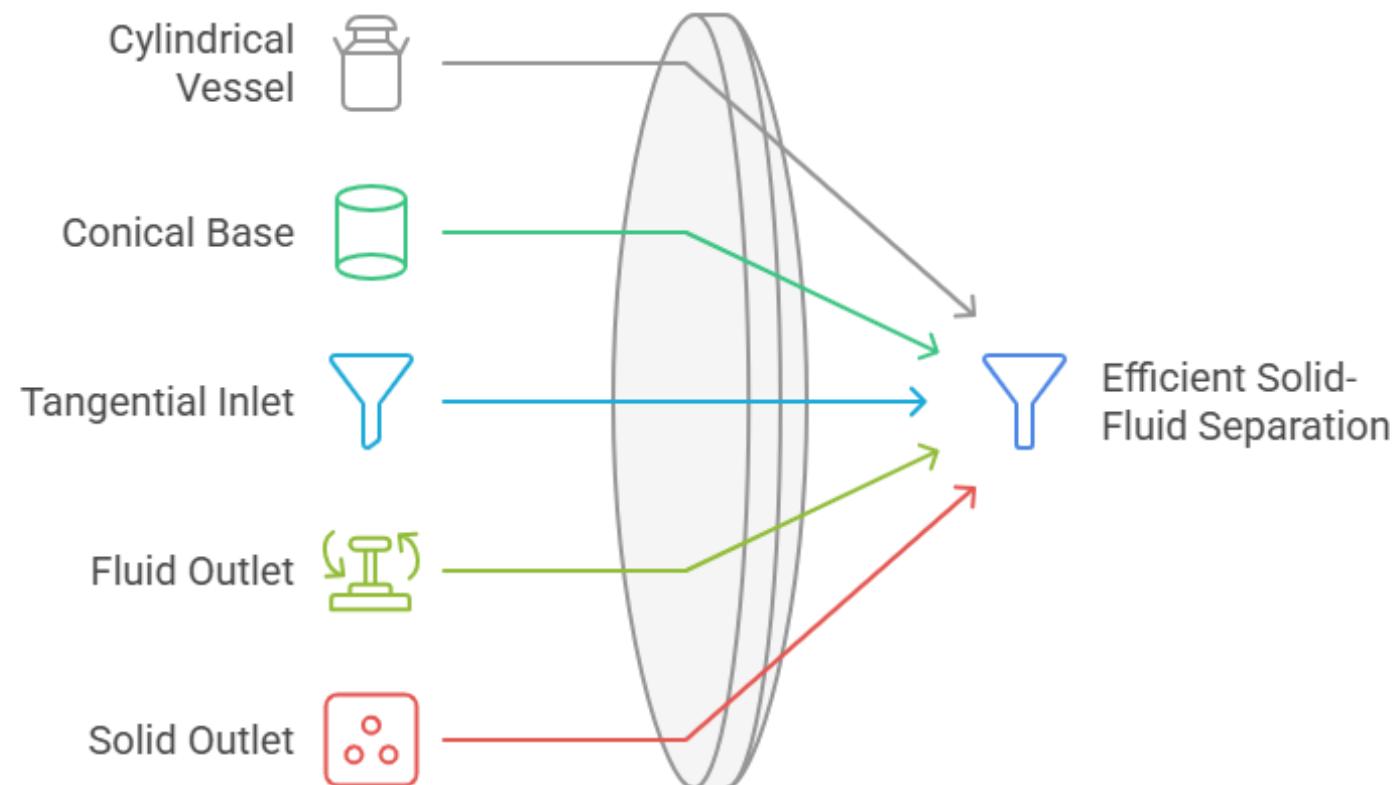
Cyclone Separator Process



-  Solid-Gas Suspension Introduction
-  Rotary Movement Creation
-  Fluid Exit
-  Centrifugal Force Application
-  Solids Fall to Base
-  Solids Discharge

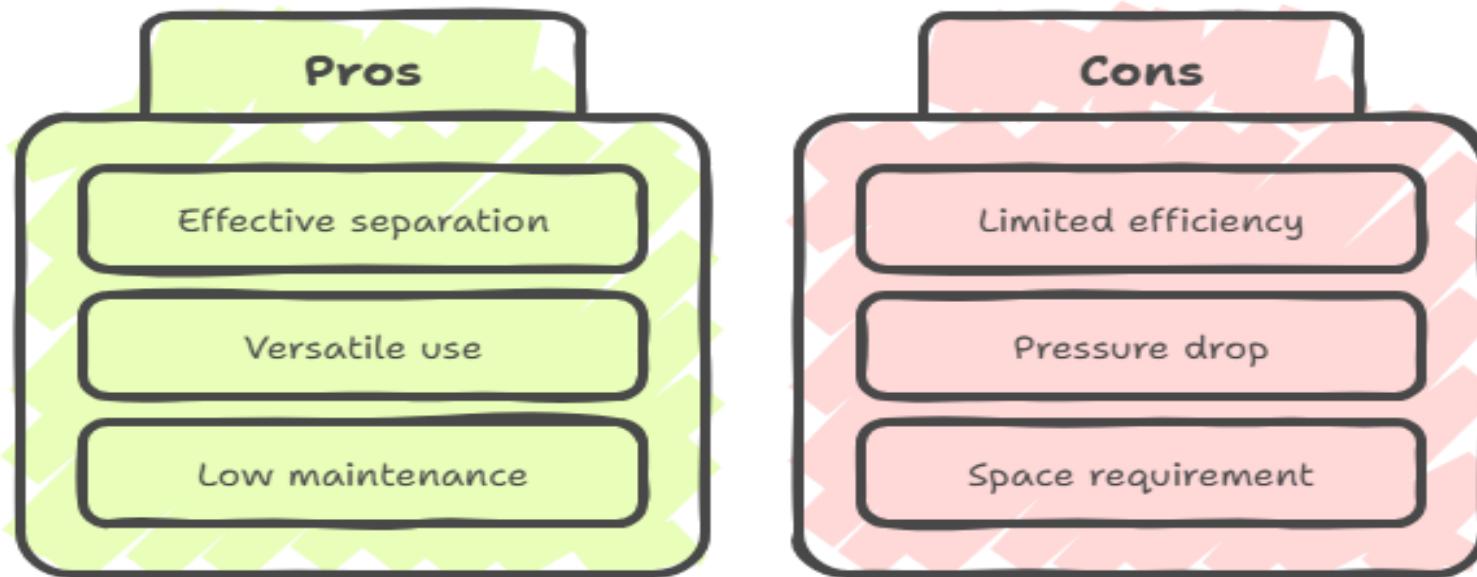
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Components of a Cyclone Separator



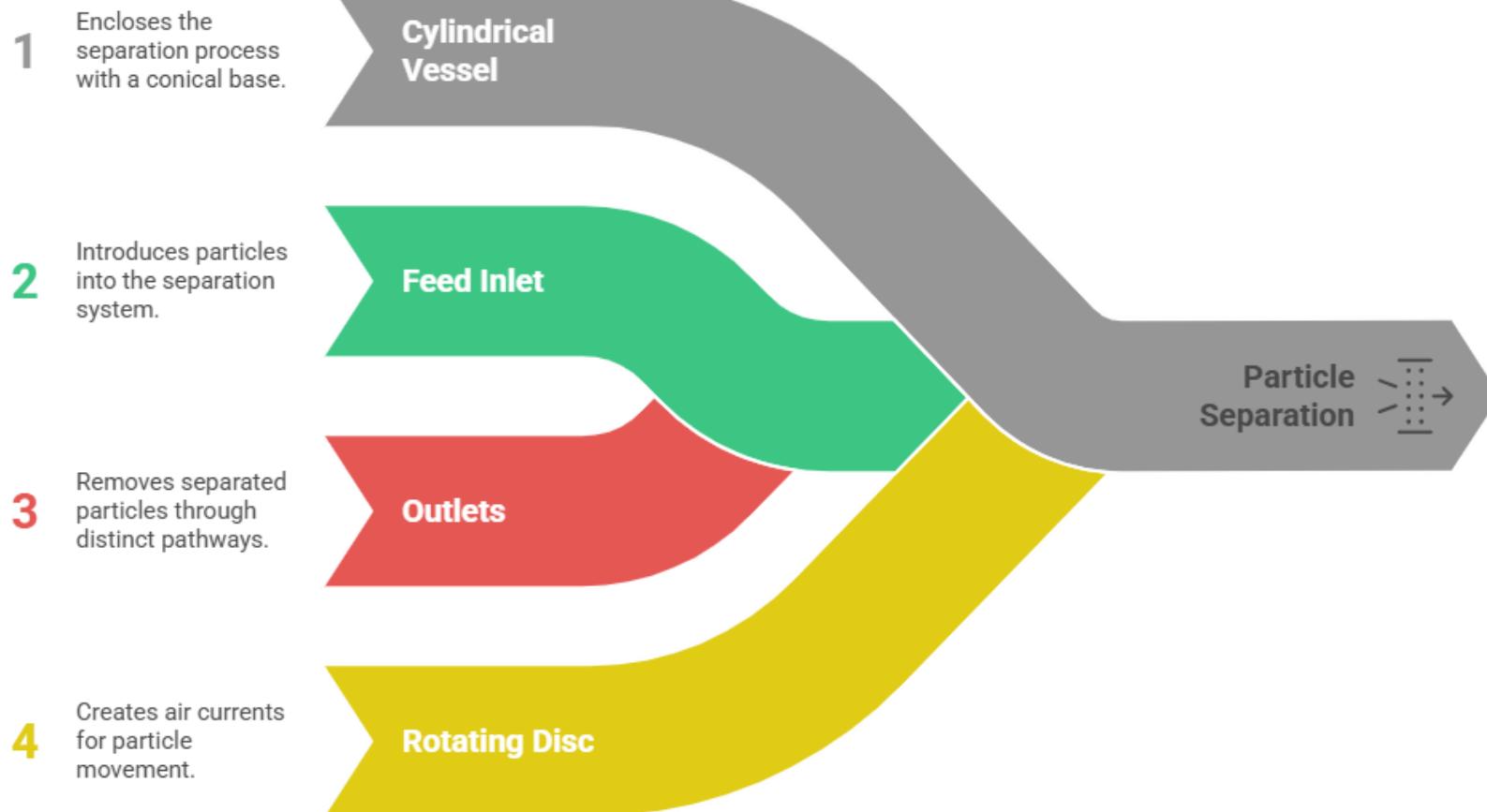
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Cyclone Separators



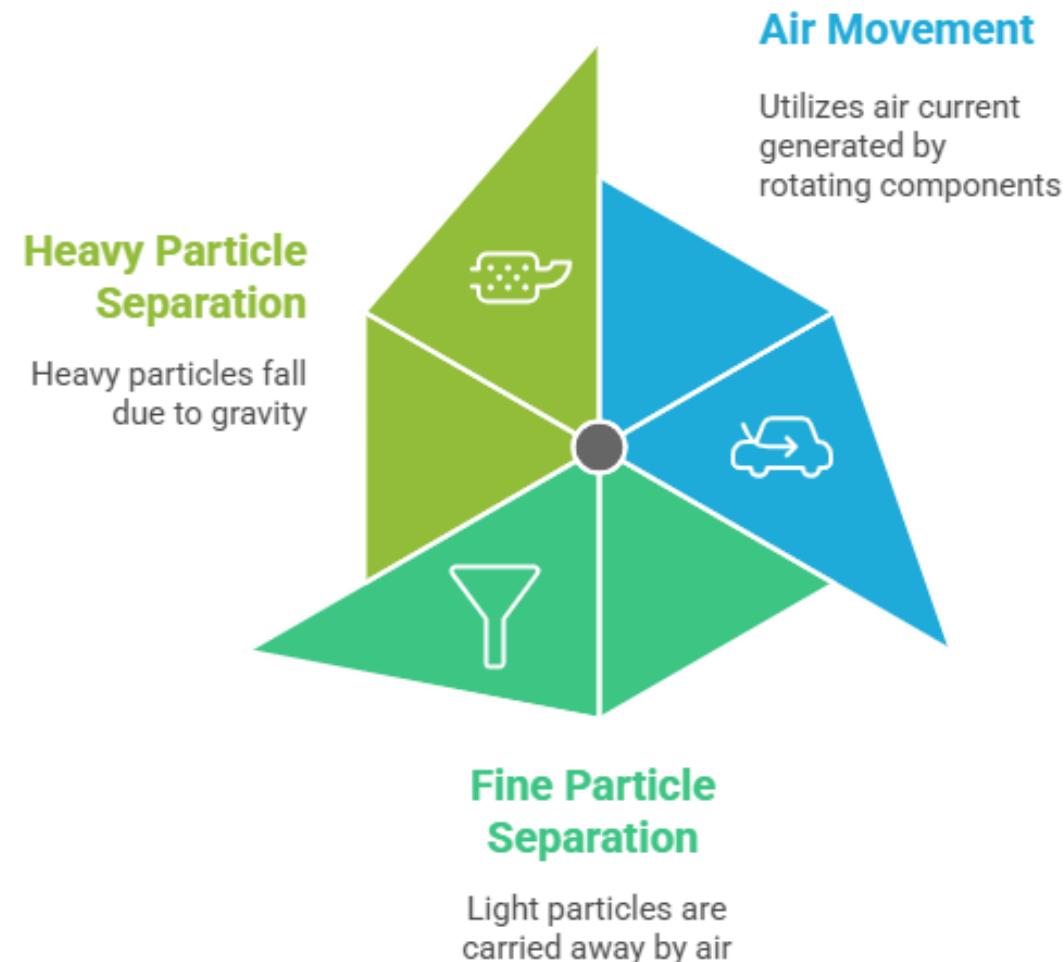
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Air Separator Components



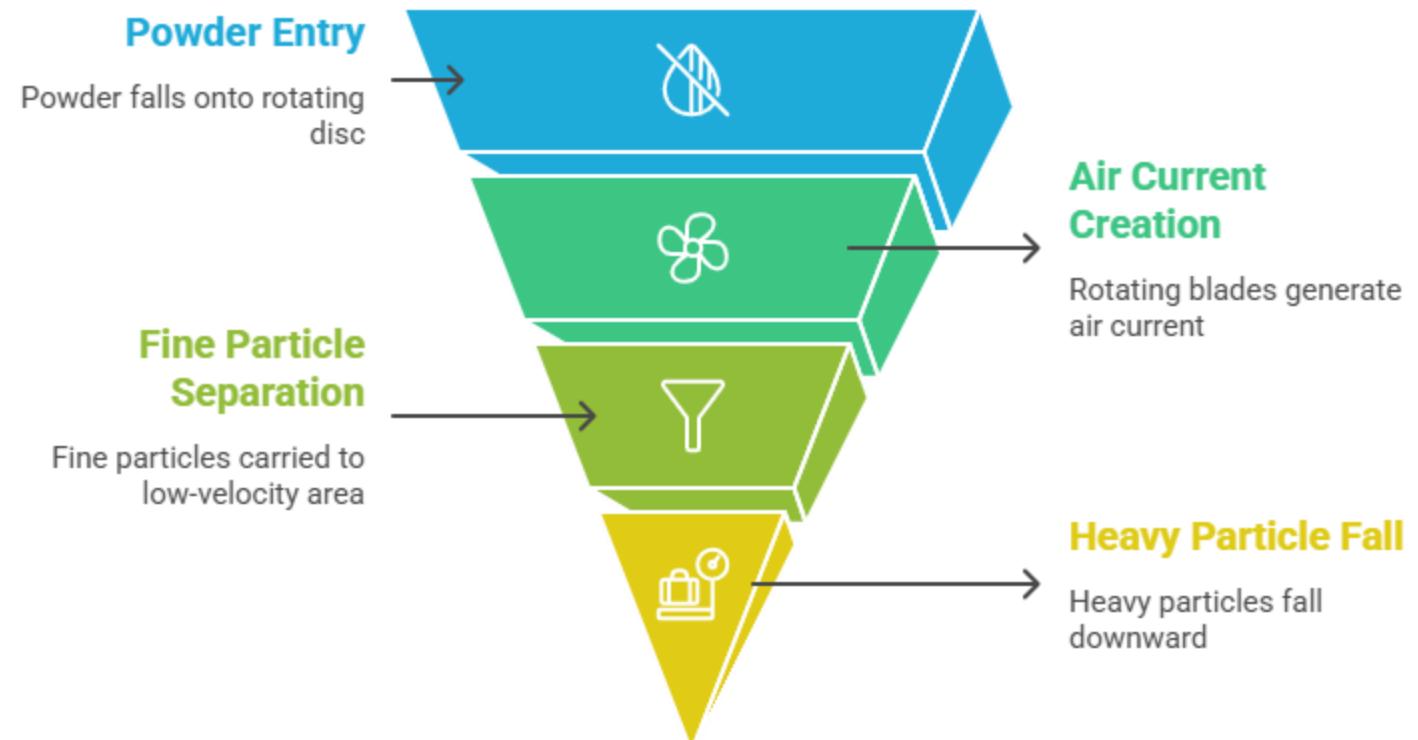
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Air Separator Mechanism



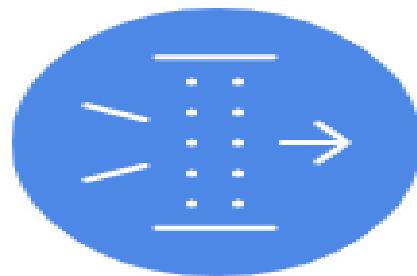
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Air Separation Process



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Choose the appropriate elutriation method for powder separation.



Traditional Elutriation

Separates particles based on settling
in a tank

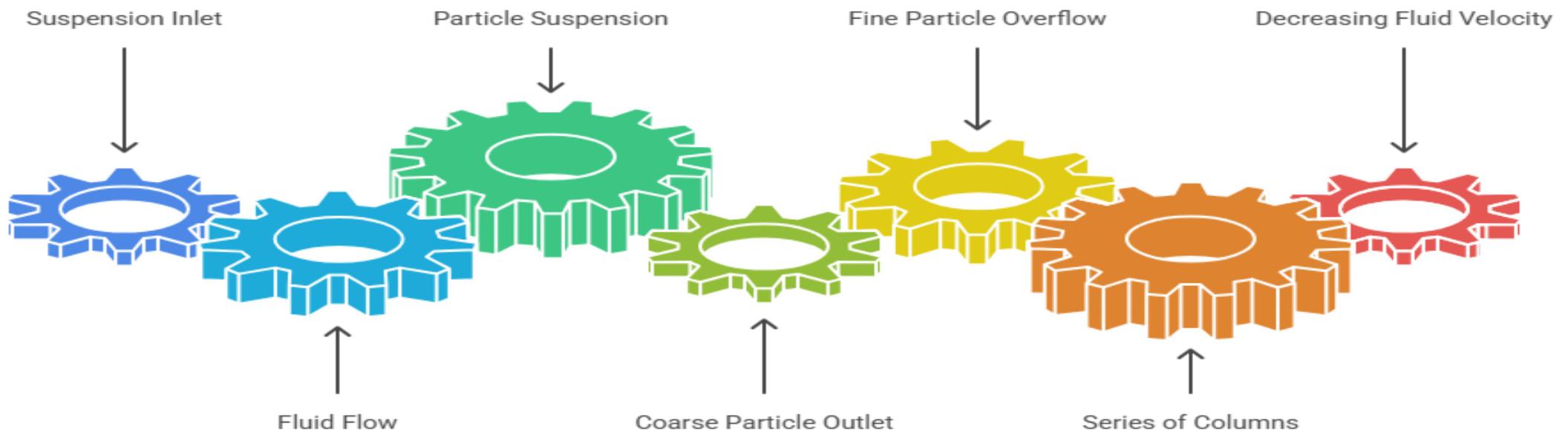


Modern Elutriation

Separates particles using fluid flow
in a column

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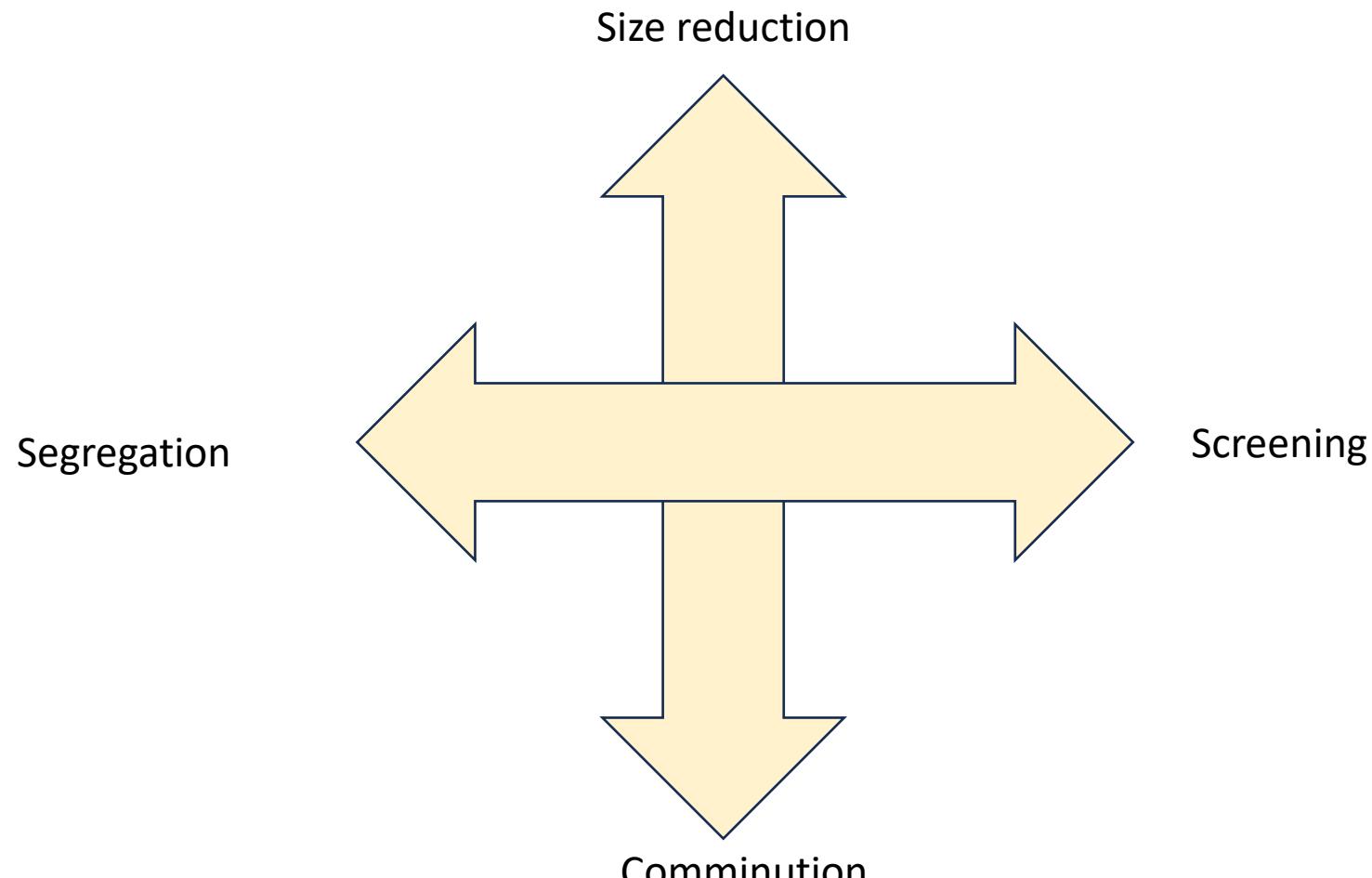
Modern Elutriation Process



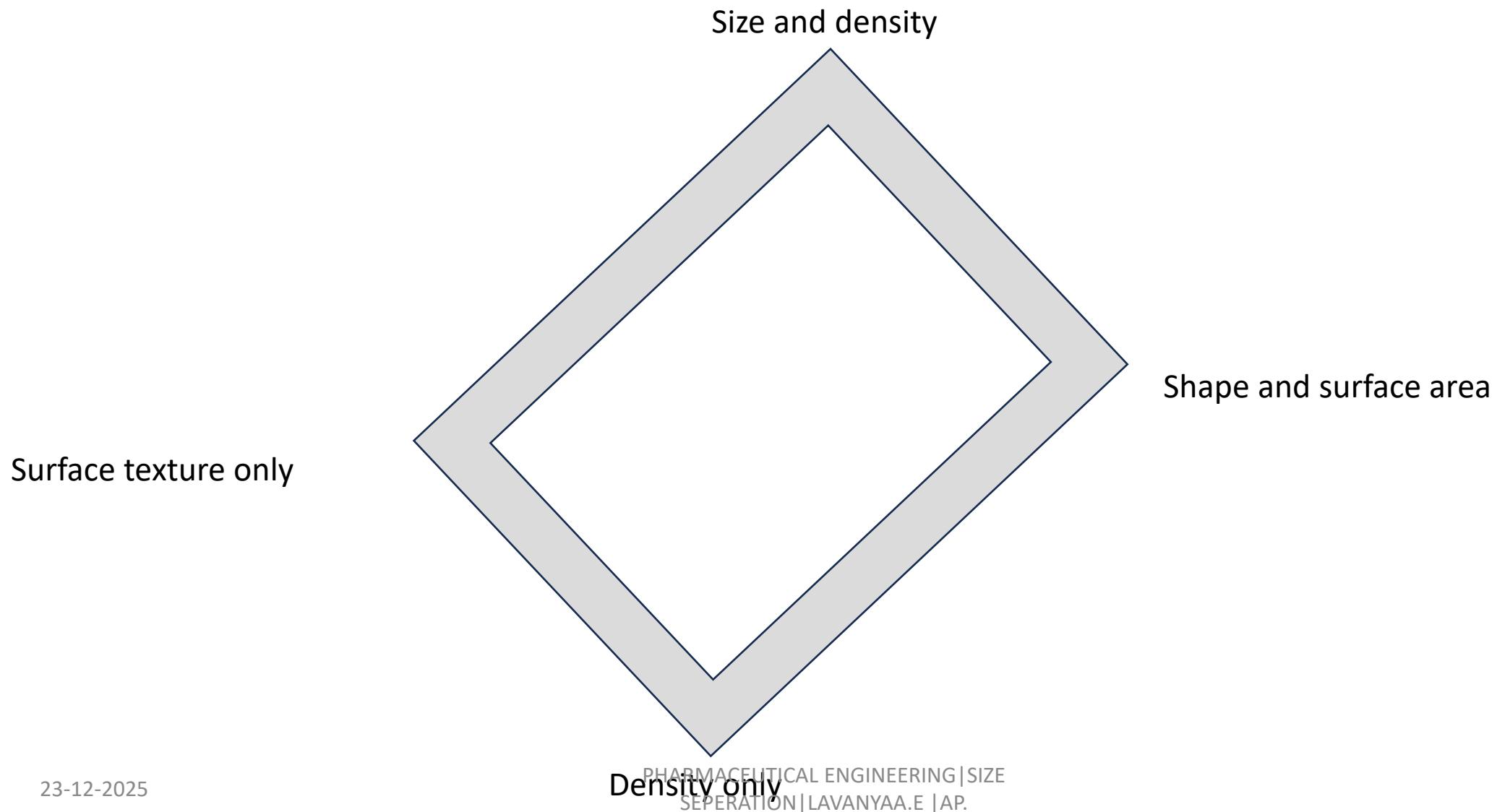
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ASSESSMENTS

Size separation is also known as



In cyclone separator, separation primarily depends on:



THANK YOU