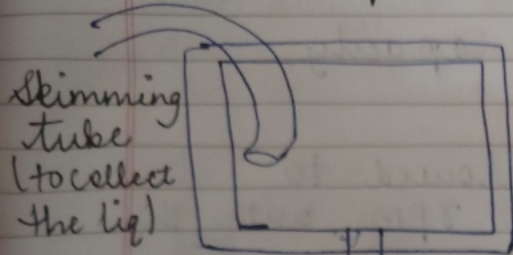


Non perforated basket centrifuge →



→ motor (generally underdriven)

Principle → Sedimentation centrifuge

Solid on walls & liq as supernatant

for two liquids the heavier liquid settles down & the lighter liq forms supernatant

Construction → Basket generally made of copper & stainless steel to withstand high strain & corrosion

↓
Skimming tube to collect the liquid

↓
Underdriven

Working ↴

loading acc. to capacity



Close the lid allowed to rotate at const. rpm with the help of motor



for solid - liq (solid retains on wall & liq forms supernatant)
skimming tube for liq collection
& solid is scrapped off



for liq - liq heavier settles down
& lighter forms supernatant



first at high power then low power.

Semi Continuous ↴

Principle → Centrifugal + filtration works in semi continuous cycles

Construction → Revolves vertically
sample injected through slurry pipe.
filter media on top as well as bottom,

classmate
Date _____
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Semi continuous nature
The sample starts filling in
with the air tube alongwith the
inlet tube

As the capacity is full the
hydraulic assembly block air
flow return sample inflow stops.

→ Knife is used to scrap off the
filter cake & selected as dry
crystals at bottom.

few filter cake is left on the walls.

Working

Load sample as per capacity

↓
hydraulic assembly stops the inflow
of sample by stopping air flow

↓
vertically the apparatus operates

↓
the filter cake gets deposited &
thickens

↓
As filter cake touches the knife
it actuates & scrapes it off leaving

some filter cake to promote
depth filtration.

Super Centrifuge

Principle $\rightarrow$ Sedimentation centrifuge
liq-liq having minor density
diff or solid-liq with very
small size of solid. (Continuous)
in nature (for ultra sensitive).

Construction $\rightarrow$ Tubular centrifuge

↓
feed inlet at bottom

↓
tube diameter is small to improve
efficiency (smaller dia, higher efficiency)

↓
Motor driven (high power)

↓
heavy at bottom, light on top

↓
on left side a two tubes for
separation of light & heavy
phase.

Working ↓

feed inflow through pipe

↓
Rotate at high speed

↓
heavy at bottom lighter at top

↓
can be separated continuously

