

# UNIT 4

## WHAT IS A CENTRIFUGE?

### Centrifuge

**A centrifuge is a machine used to separate small particles suspended in fluids** by spinning test tubes containing the suspensions at very high speeds.

The larger particles separate first because they receive more centrifugal force than the smaller particles and thus collect at the bottom of the test tube.

The salad spinner is a kitchen utensil used to dry lettuce after it's washed.

The spinner has a basket with large holes that fits inside a slightly larger container, the container has a lid with a handle and a gear mechanism that hooks onto the inside of the basket.

When you turn the handle, the basket spins inside the container.

You put wet lettuce in the basket, close the lid, and spin it fast.

A few seconds later you remove the lid, the lettuce is dry inside the basket, and the water that was on the lettuce is now at the bottom of the container.

That's because the spinning action separates the water from the lettuce by centrifugal force: the water is heavier than the lettuce and so it receives more centrifugal force.

Therefore the water's centrifugal acceleration is larger than the lettuce and it separates from the lettuce under gravity.

The basket traps the dry lettuce and prevents it from flying out.