

## VIDEO TRANSCRIPT

### A Look inside the Lab: Centrifuges – Video transcript

A centrifuge, basically by spinning in a circle at very high speeds, you can separate things by densities.

So, things that are more dense are going to go to the bottom of your tube, and often times we take advantage of this if we have cells that are in a solution. If I spin them down, I can separate the cells from the media. All the cells will be at the bottom, and all the media will be on top, and then I can remove the media if I'm running an experiment and I need them in a different type of solution.

One thing about a centrifuge is you have to balance it or you can damage the rotor. And what I mean by balance is a tube of the same weight as the tube I'm spinning has to go directly across from it so that it's symmetrical – each side weighs the same amount. If I were to put only one in, since this spins, if one side is heavier, it'll actually have tilt and then you can break the rotor.

We use this (machine) for a lot of different things, so if you've ever heard about your platelets in your blood, and your white blood cells and your red blood cells, we can actually spin blood with a substance called Ficoll, and we can get different layers where all the platelets are on the top, and you have a layer with the white blood cells, and you have a layer with the red blood cells. So, if we wanted to look just at your white blood cells, we could isolate them simply by density using the centrifuge.