

VALENCIA COLLEGE

Chemistry

Lab Technique 10: Using a Centrifuge

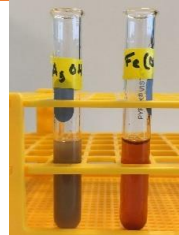
A centrifuge is an instrument that rotates rapidly. It is used to separate solids from liquids or liquids of different densities through centrifugal force. The denser material is forced to the bottom of the centrifuge and compacted. The separation process is completed by decanting the supernatant (the liquid above).

Place a mixture of a solid-liquid or liquid-liquid in a 13 mm × 100 mm test tube (make sure that the test tube fits in the centrifuge) or a centrifuge tube. Note:

- Keep the volume at least 1 cm below the top.
- Label it.



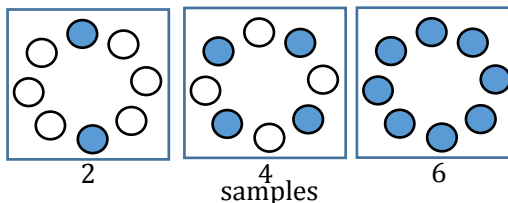
Always operate the centrifuge with an even number of test tubes containing approximately the same level of liquid. If you do not have another sample, then fill another 13 mm X 100 mm test tube with water or solvent.



Open the lid on the centrifuge.



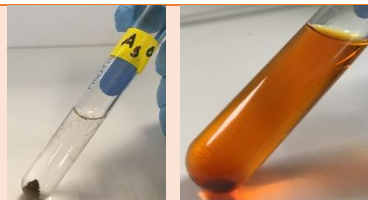
Place the test tubes in opposite wells to balance them. Notice the position where you place them. The slots are identified with numbers.



Close the lid on the centrifuge.

Turn the dial to spin the sample. A good rule of thumb is to turn the dial past five, then turn it down to 1-2.

Once the centrifuge stops, carefully remove all of the test tubes. Inspect the sample. If the separation is not complete, reposition the test tubes in the centrifuge and increase the centrifuge time.



Warnings:

- **Never stop a centrifuge manually. In addition to being a safety issue, you might damage the centrifuge and ruin your sample.**
- **Do not open the lid of the centrifuge until it has come to a complete stop.**