

Gravity Filtration

Nancy Gardner of the California State University, Long Beach Chemistry Department presents "Chemistry Lab Procedures: episode one, Gravity Filtration."

To separate solids from solution, we use gravity filtration. Gravity filtration is a slow process, used primarily when time is not critical or vacuum filtration is not practical.

A gravity filtration set up includes a glass funnel, an Erlenmeyer flask, and pre-weighed filter paper.

We begin by folding the filter paper in half, and then folding it in half again. The filter paper is placed in the glass funnel, so that the filter paper is just short of the rim on our funnel.

Open the filter paper to form a cone, and wet it with a few milliliters of solvent.

Let the solution containing our solid settle until it is resting on the bottom.

Slowly decant the solvent into the funnel using a glass stir rod.

Slurry the remainder of the mixture and then with a glass stir rod, decant the mixture into the funnel, careful not to touch the funnel with the glass stir rod.

Once the mixture has been filtered, rinse the container with solvent to make sure all of the solid has been transferred to the funnel.

Rinse the solid collected in the filter paper with solvent.

To ensure you have not lost any product, make sure the filtrate flowing out of the filter paper is clear.

Wet filter paper tears easily, so allow it to dry before attempting to remove it from the funnel.