how to use volumetric flasks

➤ Volumetric flasks are mainly used for preparation of highly accurate solutions.

➤ First add the exact weight of the product inside the flask. Fill the flask about half the volume and mix the content.

➤ Then fill again until the level reaches a bit lower than calibration ring mark.

➤ Adjust the temperature of flask and the content to 20°C.

➤ Add a little more liquid so that the meniscus will be exactly at the same level of the ring mark.

➤ Pay attention to read the meniscus at the eye level also not to wet the inner neck wall above the ring mark.

how to use measuring cylinders

➤ Cylinders are mainly used for the exact measurement of liquid volumes.

➤ First fill the cylinder with liquid and wait until the residual liquid on the wall will to filter down.

➤ Then read the volume level from the cylinders volume graduation chart.

➤ Pay attention to read the volume level at the eye level. Do not wet the inner neck wall above the calibration mark.

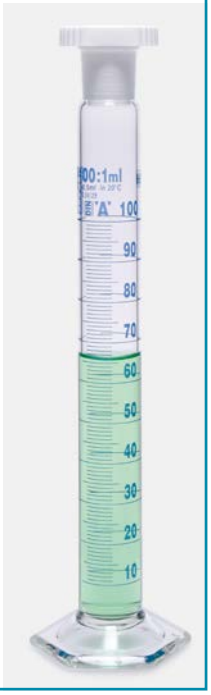
how to use mixing cylinders

➤ Mixing cylinders are mainly used for the exact measurement of liquid volumes.

➤ First fill the cylinder with liquid and wait until the residual liquid on the wall to filter down.

➤ Then read the volume level from the cylinders volume graduation chart.

➤ Later add the precise weight of the substance and dissolve it by shaking the cylinder.



how to use burettes

➤ Fill the burette a bit higher than the "0" level.

➤ To activate the stopcock, drain the solution but never below the "0" mark.

➤ Pay attention there will be no air bubbles left in the burette.

➤ Fill more solution above 10 mm of the "0" mark. Do not wet the burette wall above the liquid level.

➤ By focusing the meniscus at eye level drain the solution to the exact "0" mark.

➤ Wipe off the drops at the stopcock tip and slowly start the titration. When color changes stop the titration and wait for the 30 seconds.

➤ Wipe off the remaining drop since this is also the part of the measured volume.

how to use pipettes

➤ Fill the liquid max 5 mm above the volume mark. Wipe off the outer surface of the pipette.

➤ Hold the pipette at eye level and place the tip to the wall of a beaker with a slight angle.

➤ Discharge the access volume until the meniscus reaches the calibration mark.

➤ When the level of the liquid reaches to the tip wait according to waiting time.

➤ When the waiting time is over, wipe the tip gently pulling upwards on the beaker wall and transfer the liquid.

➤ If there is still any residual liquid left in the tip, never blow out.

how to use density bottles

➤ Carefully weigh the empty and well dried density bottle.

➤ Fill the bottle up to 2/3 of the neck level while avoiding air bubbles.

➤ Adjust the bottle temperature to 20°C in a thermostatic bath. Insert the stopper of the bottle carefully. The capillary of the stopper will discharge the liquid.

➤ Dry the body of the bottle and the stopper carefully by wiping with a tissue paper. Pay attention not to remove any liquid from the capillary tube.

➤ The liquid inside of the bottle should exactly be at the same level with the upper end of the capillary tube.

➤ Final step is weighing the filled density bottle and calculating the density.