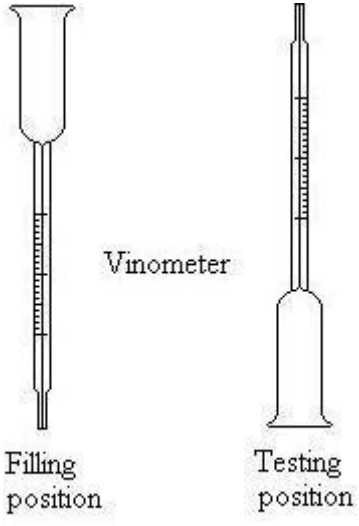
Use of a Vinometer to estimate Alcohol Content:

- A vinometer is a piece apparatus that consist of an open, graduated glass tube with a small filling reservoir.



- The vinometer's reservoir or funnel is filled with a small amount of wine being tested until some wine exits out at the other end

  It is then turned around and placed on a flat surface, filling reservoir side down, and allowed to self drain.

  The alcohol concentration level is read of the vinometer's scale, on the capillary, at the top of the liquid being measured, in %v/v alcohol.

- The level of the liquid is determined by the modifying affect that alcohol has on the interfacial tension between water and glass, compared with the opposing surface tension of water.

- The greater the alcohol concentration, the less marked the liquid's capillary action and the lower it will sit in the tube of the vinometer.

- The vinometer is calculated on the basis of pure alcohol and water solutions> Wine is not a pure water/alcohol solution and the accuracy of a vinometer can not be relied upon when used for wine directly.

    - Sugar interferes with the interfacial effects that a vinometer's action relies on and hence the **method can only be applied to dry wines.**

    - Similarly, other components in wine can also interfere with accurate measurements.

- As a rough approximation of the wine alcohol content, the use of a vinometer with an internal triangular cross section has been reported to give improved accuracy.

- When measuring white wine, the addition of a red dye allows better visualization of the wine level. However the dye should not contain alcohol or components that would interfere with the measurement

Taken from: http://www.monashscientific.com.au/Vinometer.htm