

Alternative Methods of finding composition of a mixture.

- o Plotting a graph of refractive index vs concentration to get a calibration curve.

Advantages

- o Fast measurement
- o Low sample volume
- o High accuracy
- o No sample preparation
- o No moving parts in measuring instrument

Disadvantages

- o Only binary and quasi-binary solutions accurately determinable

From the above mentioned methods of composition determination, the best choice is the refractive index method (refractometry) because that method aligns with the objectives of the experiment, to analyze the composition of a mixture, to a high degree of accuracy.

Advantages

- o High accuracy
- o Selective concentration determination in multi-component mixtures

Limitations

- o Sample preparation necessary
- o Accuracy depends on mass solution
- o Destructive measurement
- o Chemical waste
- o Slow measurement cycle

## 2. Titration

Titration (also known as volumetry or volumetric analysis) is a quantitative analytic method using a standard solution which reacts with the sample and shows a transition point at a defined ratio.

Advantages

- o High accuracy
- o Selective concentration determination in multi-component mixtures

Limitations

- o Sample preparation necessary.

1.