

Clevenger's Apparatus

Principle:

Clevenger's apparatus works on the principle of steam distillation. Volatile oils present in plant materials are vaporized with steam, condensed, and then separated based on their immiscibility and density difference from water.

Main Parts:

- Round-bottom distillation flask
- Clevenger trap (graduated oil–water separator)
- Condenser
- Heat source

Uses:

- Extraction and estimation of volatile (essential) oils
- Analysis of aromatic plant materials
- Quality control in pharmaceutical and herbal laboratories

Advantages:

- Simple and accurate method for essential oil determination
- Allows direct measurement of oil content
- Suitable for natural products