

Molecular Distillation/Short Path Distillation is a comparatively new separation technology. It can separate liquid-liquid mixture under temperature that is far lower than boiling point by the difference of mean free path of molecules under high vacuum condition. Such separation is difficult or unable to achieve on normal distillation equipments. Molecular Distillation is especially suitable to separate substances of high boiling point, heat sensitive and easy to be oxidized.

Main application field: Separation process in trades like Food, Pharmaceutical, Fine chemical, Electronic materials, Polymers (Polyols, fatty acids, polyphenols-compounds, polyurethane, epoxy resin, lactate, glycerol monostearate, flavors and fragrances, fuel oil and paraffin oil), etc.

Features and working principle of Short Path distillation

- 1. Distilling temperature far lower than the boiling temperature** Has advantages on dealing with materials that is heat sensitive, of high boiling temperature, belongs to biological acids or lipids
- 2. Heating process of material is very quick** It may take only few tens of seconds to finish a separation on short path distillatory when it takes hours on a normal evaporation apparatus.
- 3. It is a physical separation process** A natural and gentle separation process that is widely applied on deodorization, decolorization, and purification on materials with high value.

Advantages of Short Path Distillation System:

- Uniform thin film (option of roller film or wiper film system)
- Continuous distillation process
- Very Low operating pressure (0.001 mbar achieved by magnetic seal bearing)
- Short residence time
- Perfect for highly viscous, heat sensitive, high boiling point products, and high molecular weight materials
- High evaporation rates
- Compact and user friendly