

Glass Wiped Film Distillation Unit

/ LiquidExtrac Scientific and Industrial Equipment



Glass Wiped Film CBD Distillation

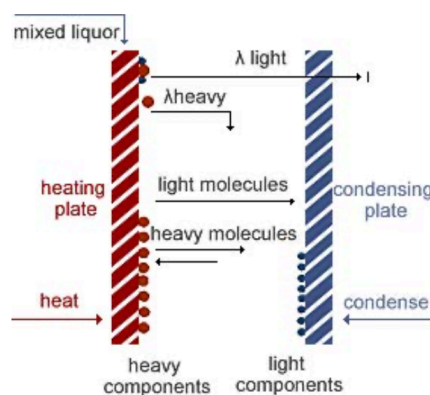
Molecular (short-path) distillation is the best thermal separation method for heat-sensitive material because it is the gentlest type, causing the least amount of thermal degradation of product. Our wiped film evaporator system are widely used for cannabis/hemp, garlic oil, cod liver oil and chemical and pharmaceutical industries. Shorter residence time, lower separation temperature, capability of continuous and unattended operation makes LiquidExtrac molecular (short-path) distillation system standing out.

Material is delivered from a feed flask into a cylindrical evaporation section, having heating, on the outside, (either electric resistance or circulating hot fluid jacket type), and a diagonally slotted wiper mechanism forcing liquid around and downward in a thin film on the inside.

In the center of the body is a closely positioned internal condenser, providing a short path for vapor molecules traveling from the heated surface to the condenser surface. For cannabinoids, the internal condenser fluid must be kept elevated (~70C) to prevent high viscosity or freeze up of THC, CBD and related components.

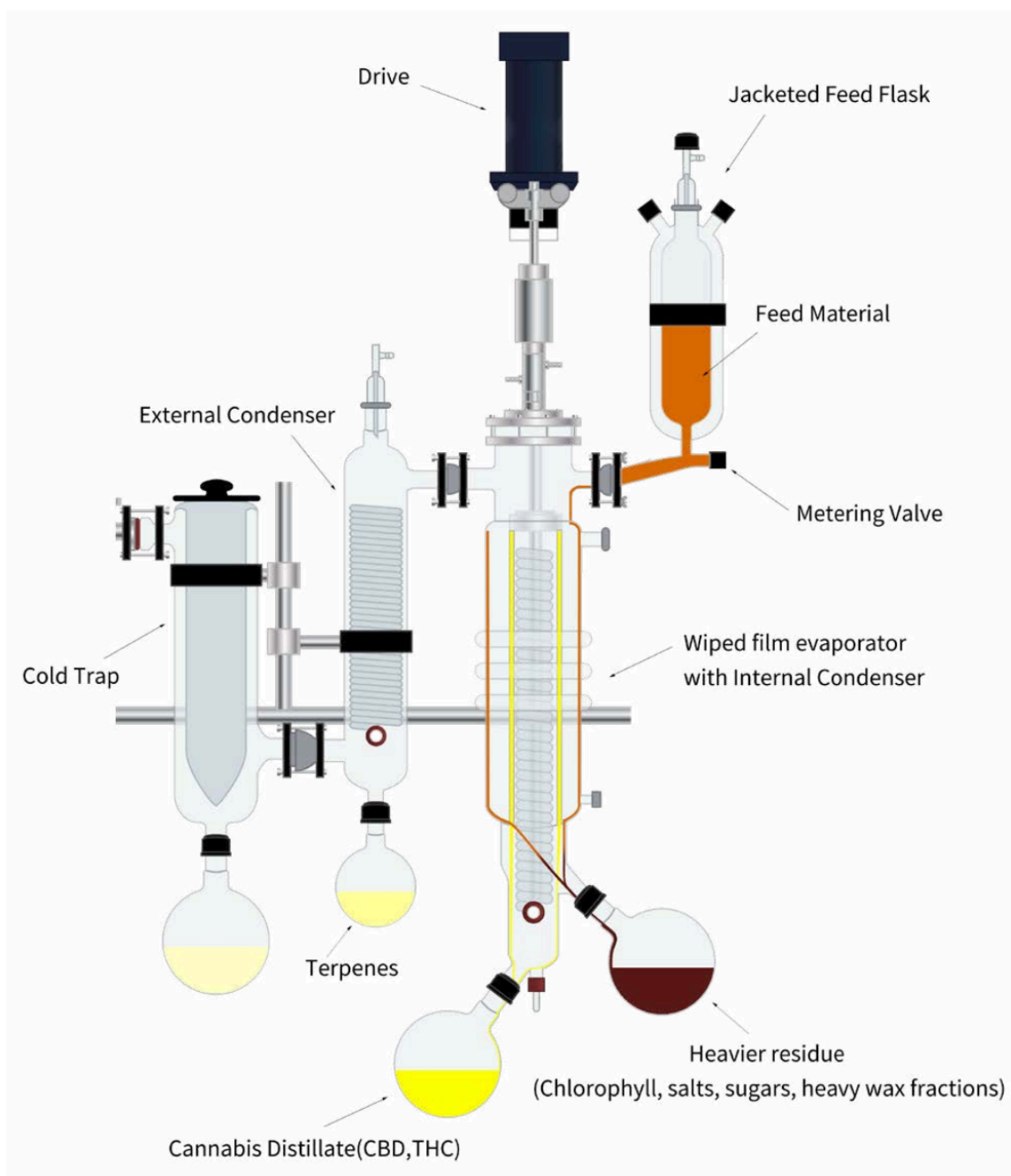
During the journey downward, lighter (lower boiling point) fractions of the liquid begin to vaporize, move to the internal condenser and condense, falling down as a liquid into a well that captures and separates the distilled liquid (cannabinoid) which flows into a receiver flask.

Heavier residue material (Chlorophyll, salts, sugars, heavy wax fractions) does not evaporate and instead travels the length of the still body and flows into a different receiver flask.



Principle Diagram of the Molecular Distillation

Technical Structure



Specifications

Model	LEGMD-80	LEGMD-100	LEGMD-150	LEGMD-200
Feed Rate (kg/hr)	0.5-5	0.75-7.5	1.25-12.5	1.75-17.5
Estimate Throughput at End of 8-10 hr/day for CBD (kg)	~8	~12	~20	~28
Dimension (LxWxH mm)	2120x1740x628	2120x1740x628	2270x1940x628	2420x2040x628
Effective Evaporation Area (m ²)	0.1/1.1	0.15/1.6	0.25/2.7	0.35/3.8
Evaporator Internal Diameter (mm/inch)	80/3.2	100/4.0	100/4.0	200/7.9
Feeding Funnel Volume (L)	1	2	3	5
Internal Condenser Area (m ²)	0.2	0.3	0.4	0.5
Distillate Receiving Vessel Volume (L)	1	2	5	5
Residue Receiving Vessel Volume (L)	1	1	3	5
Wiping Motor Power (W)	120			
Maximum Speed (rpm)	400			
Stirrer Seal	Oil-less Magnetic, High Vacuum			
Wiper	PTFE Scraper			
Material	Borosilicate Glass 3.3 / SS316L (wet parts) / SS304 (frame)			
Vacuum Gauge	Pirani Style			
Operation Temperature (C)	Up to 250 °C			
Vacuum Degree	Better than 10 Pa			
Voltage	220V-Single Phase / Customizable			

Turnkey Solution

LiquidExtrac is committed to continually meet and exceed your needs and requirements. We offer you turnkey solution, including heating circulators, cooling circulators, vacuum pump and diffusion pump.