

Continuous Extraction (LLE)

Streamlining downstream processes with continuous extraction



Sai

Make it better together

Liquid-liquid extraction (LLE), also known as solvent extraction and partitioning, aims to separate compounds based on their differential solubility in two immiscible or partially miscible liquids. This separation technique has been successfully applied to several such solutions due to its inherent flexibility and its applicability for handling heat-sensitive products. At Sai Life Sciences, our team has refined the process to achieve the desired level of separation with a continuous extractor thereby reducing cycle time and increasing efficiency.



- Perforated plate enhances separation efficiency
- Pulsating motion of the extractor facilitates the migration of one or more solutes from one phase to another
- Peristaltic pump of varying capacity optimises the flow rates to get the desired separation
- Decreases process cycle time
- Improves productivity with lesser energy consumption

Highlights

- Continuous downstream processing with counter-current extraction using a glass rotating disc contractor
- 10-stage design with flexibility to handle different flow rates of heavy and light phases
- Reduced batch cycle time and solvent consumption
- Accomplished typical separation— difficult in the batch mode
- Delivered over 40 projects at pilot/ kilo scale

Capabilities and infrastructure

- Capabilities Pilot 1.0 to 3.0L per hour
- Perforated Rotating disc extractor (glass column)
- Easy to operate, automate and scale-up



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