

### **543a Trays Versus Packing. Selection of the Optimal Extractor**

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As in distillation, trays and packings are often used in liquid extraction service. When properly designed and applied, they provide excellent capacity with adequate mass transfer efficiency. Trays and packing are simple, economical, require no moving parts or seals that could fail, can handle high throughputs and are amenable to mechanistic modeling. However, they may have significant disadvantages when improperly applied. This paper will address the appropriate extraction operating conditions for trays and packings. The fundamentals of liquid-liquid hydrodynamics will be discussed. Experimental data from 4.0 inch and 16.8 inch diameter (i.d.) liquid extractors will be presented. In addition, the performance of sieve trays and packings in supercritical extraction service will be presented.