

	Evaporation									Filtration						Adsorption			Density Sep					
	Single stage vacuum evaporation	Multi effect vacuum evaporation	Freeze Drying	Tray/Kiln/Oven/Air Dryer	Rotating drum	Fluidised Bed dryer	Moving Belt	Dryer with indirect heating	Spray drying		Static filter bed / filter press	Pressing / screening / dejuicing	Cross flow filtration	Moving belt / rotary vacuum filter	Pervaporation	Hollow Fibre Membrane		Solid adsorbents	Liquid Liquid extraction	SCF/Liquid extraction		Coalescence / DAF	Centrifugation	Water displacement
Miscible liquid phases	■	■														■		■	■	■		■		
Dissolved solids	■	■	■	■				■		■	■	■	■	■	■	■		■	■	■		■		
High water content	■	■						■		■	■	■	■	■	■	■		■	■			■		
High solids content			■	■	■	■	■	■	■	■	■							■	■	■				■
Solids to dryness			■	■	■	■	■	■									■	■	■					■
Liquids to dryness	■	■												■	■		■	■	■					
Partial dewatering										■	■	■	■	■				■			■	■	■	■
Large solid substrates			■	■			■				■						■	■	■					■
Thermally sensitive compounds	■	■	■				■			■	■	■	■	■	■			■	■	■		■	■	■
Shear sensitive solids			■	■	■	■	■	■		■	■	■	■	■	■			■	■	■		■	■	■
High Volume Flows	■	■				■	■	■			■	■	■	■	■		■	■	■		■	■	■	
Low operating cost	■	■		■	■	■	■	■		■	■	■	■	■	■	■	■	■	■		■	■	■	■
Low capital investment	■			■	■	■	■	■	■	■	■	■	■				■	■	■		■	■	■	■
Water remediation	■	■	■							■		■	■	■	■		■				■	■		

Figure 7.1 – Suitability of various processing methods for different types of operation



Figure 7.2 – Process selection map. Some process options identified may only be applicable for specific sub-applications, or be dependent on availability of a suitable solvent or adsorbent. Processing steps may also be used in combination – for example water content reduction by falling film evaporation followed by a final drying step suited to a viscous or solid final product.