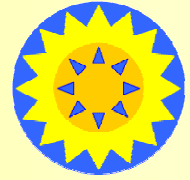


# Solvent Recovery using SolSep Nanofiltration Elements

SolSep BV  
Solutions for Separations



## Solvent Recovery

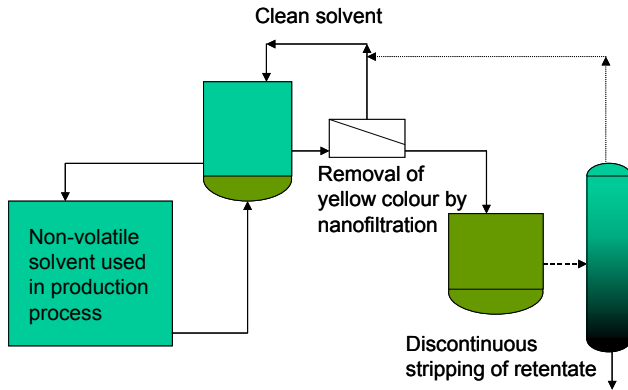


Figure 1. Flow chart of solvent recovery process. Nanofiltration facilitates re-use of solvent and reduces energy consumption.

## Nanofiltration Unit



Figure 2. Filtration unit with 2 SR-1 elements. Capacity is 25 L/h. Filtration performed at 35 °C.

## Membrane Performance

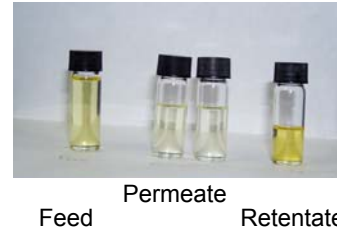


Figure 3. Yellow colour (MW ~250 Da) is retained by the nanofiltration membrane.

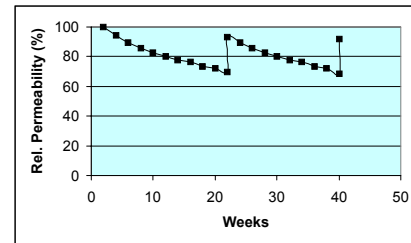


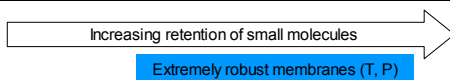
Figure 4. Long term performance of membrane elements.

## Conclusion

SolSep nanofiltration membranes and spiral wound elements enable cost effective recovery of solvents. The nanofiltration unit will be upgraded to 400 L/h.

## SolSep Membranes & Spiral Wound Elements

	Ultrafiltration		Nanofiltration				
	010104	010706	010306	010206	030306	030705	030306F
Alcohols	X	X	X	X	X	X	X
Esters	X	X	X	X	X	X	X
Ketones	X		X		X	X	X
Aromatics	X		X		X	X	X
Chlorinated			X		X		X
Red.Atmos.			X		X		



Element	S* (m <sup>2</sup> )	Size (diameter x length)
SR-1	1 - 1.8	60 mm x 505 mm 2.5" x 20"
SR-2	1.5 - 3	60 mm x 1010 mm 2.5" x 40"
SR-5	5 - 8	102 mm x 1010 mm 4" x 40"
SR-20	15 - 20	195 mm x 1010 mm 8" x 40"

\*Filtration area S depends on spacer thickness