# In-line recovery of solvents for chromatographic uses

**Project:** CS-01-13
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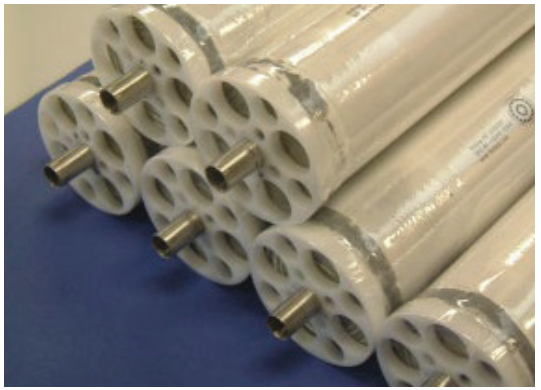
## Objective:
Use membrane technology to recover organic solvents esp. methanol, ethyl acetate and acetonitrile.

## Motivation:
In many preparative downstream processing steps, very clean solvents have to be used. The consumption of these solvents contributes considerably to the costs of the operation. In would be very favorable if such solvents could be re-used. In-line recovery and re-use would be even more interesting. However, the current possibilities are very limited, specific and hence difficult to use as a generic technology.
The project aims for the development of technology to open-up in line recovery of chromatographic solvents on preparative scale.

## Project scope:
Evalution of membranes of small (pilot) scale. Strive for maximum level of purity. Analysis in ppm and ppb level. Set-up of small scale process.

## Applicability:
Add-on to present technology and should lower energy consumption as well as chemical waste (adsorptive waste). In-line and eventually also off-line.

- chemical industries
- pharmaceutical
- food
- cosmetics
- analysis laboratories
- toll recyclers



## Results:
It has been proven that molecules can be retained by membranes.
E.g. in methanolretentions of 94+% were found. Still, this tends to be too low for chromatographic application were only ppms or ppbs are allowed. Multi-passes through a membrane could lead to acceptable levels. Finalization of the work includes process design.