



Recovery of aggressive solvents, which are difficult to separate



Project: CS-01-12
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Partners: Pervatech, Givaudan, X-Flow, NL GUTS
Budget: €50.100

Objective:

Recovery of aggressive solvents by applying membrane technology.

- Givaudan: Re-use of water/ ethanol mixture with aggressive organic aromatics.
- X-Flow: Re-use of NMP

Motivation:

- Reduction of processing costs
- Reduction of emissions
- Reuse of solvents

Applicability:

- HybSi is chemically very robust compared to other membranes.
- HybSi has good selectivity for water in solvents.
- Small molecules will also permeate, possibly allowing permeation of ethanol.

Project scope:

Givaudan:

- Perform testing
- Tailor membrane
- Generate data enabling techno/economic plant evaluation
- Recommendations towards full scale plant integration

X-Flow:

- Perform testing
- Generate data enabling techno/economic plant evaluation
- Recommendations towards full scale plant integration

Results:

Givaudan:

- Recovery of ethanol from real media economically feasible

X-Flow:

- flux on real waste NMP low compared to model liquid
- fouling to be resolved

