

Supporting Information for
Efficiencies and mechanisms of chemical cleaning of fouled
polytetrafluoroethylene (PTFE) membrane during microfiltration of
alkali/surfactant/polymer flooding oilfield wastewater

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Table

Table S1 Composition of the raw wastewater.

Table S2 EDX analysis of various PTFE membranes.

Table S1 Composition of the raw wastewater.

Component	Concentration (mg/L)
Median particle diameter (μm)	5.59 ± 1.13
Crude oil	6.64 ± 2.29
SS	83 ± 17
COD	1083 ± 65
APAM	749 ± 33
Surfactant	37 ± 5
Turbidity	16.4 ± 0.4
Carbonate	1925 ± 80
Bicarbonate	2890 ± 130
TDS	5984 ± 450

Table S2 EDX analysis of various PTFE membranes.

Element	Original membrane	Fouled membrane	After NaClO+NaOH cleaning	After HCl cleaning
C	36.35	42.60	37.29	36.44
O	8.42	11.51	9.32	8.53
F	55.23	21.36	47.91	54.83
Cu	0.00	5.67	0.82	0.00
Na	0.00	0.89	0.00	0.00
Mg	0.00	0.25	0.17	0.09
Si	0.00	8.12	1.38	0.00
Cl	0.00	0.58	0.00	0.00
K	0.00	0.59	0.00	0.00
Ca	0.00	1.41	0.95	0.05
Fe	0.00	7.02	2.16	0.06