Table S1a. The results of the volumetric coagulation - Experiment 1

Parameter	Unit	WWTP wastewater	Dose of $Al_2(SO_4)_3$ [mg Al/L]				Dose of PAX-XL 19F [mg Al/L]				Dose of PAX-XL 1911 [mg Al/L]			
			1	2	4	8	1	2	4	8	1	2	4	8
N	mg/l	8.562	8.078	7.957	7.873	7.865	8.076	7.499	7.224	7.114	7.313	7.119	7.043	6.976
P	mg/l	1.99	1.45	1.09	0.51	0.44	1.70	1.47	1.15	0.60	1.63	1.41	1.01	0.55
K	mg/l	38.1	35.6				37.5				36.3			
Turbidity	NTU	2.18	0.69	0.61	0.58	0.34	0.53	0.44	0.4	0.3	0.61	0.5	0.38	0.32
pH	-	7.38	7.62	7.53	7.49	7.23	7.95	7.95	7.94	7.88	7.92	7.94	7.84	7.79
Electrical conductivity	µS/cm	1342	1346	1348	1352	1354	1350	1353	1353	1346	1347	1352	1318	1332

Table S1b. The results of the surface coagulation - Experiment 1

Parameter	Unit	WWTP wastewater	Dose of $Al_2(SO_4)_3$ [mg Al/L]				Dose of PAX-XL 19F [mg Al/L]				Dose of PAX-XL 1911 [mg Al/L]			
			0.25	0.5	1	2	0.25	0.5	1	2	0.25	0.5	1	2
N	mg/l	8.562	7.181	7.083	7.034	7	6.786	6.728	6.621	6.598	6.634	6.568	6.573	6.478
P	mg/l	1.99	1.20	0.99	0.75	0.52	1.30	1.24	1.14	1.10	1.24	1.28	1.29	1.06
K	mg/l	38.1	30.8				36.3				33.6			
Turbidity	NTU	2.18	0.61	0.58	0.51	0.46	0.83	0.75	0.64	0.53	0.7	0.61	0.54	0.45
pH	-	7.38	7.88	7.83	7.76	7.76	7.93	7.96	7.90	7.95	7.97	7.97	7.95	7.88
Electrical conductivity	µS/cm	1342	1297	1285	1347	1339	1280	1284	1289	1326	1297	1301	1300	1303

Table S2a. The results of the volumetric coagulation - Experiment 2

Parameter	Unit	WWTP wastewater	Dose of $Al_2(SO_4)_3$ [mg Al/L]				Dose of PAX-XL 19F [mg Al/L]				Dose of PAX-XL 1911 [mg Al/L]			
			1	2	4	8	1	2	4	8	1	2	4	8
N	mg/l	6.507	6.050	6.041	6.039	6.036	6.075	6.061	6.015	6.003	5.704	5.634	5.599	5.549
P	mg/l	0.47	0.14	0.10	0.05	0.04	0.31	0.26	0.21	0.08	0.29	0.25	0.13	0.05
K	mg/l	33.9	31.6				33.6				32.1			
Turbidity	NTU	2.31	1.16	0.63	0.66	0.74	0.49	0.38	0.32	0.31	0.84	0.58	0.57	0.7
pH	-	7.35	8.22	8.05	7.87	8.06	7.59	7.58	7.57	7.56	8.23	8.15	8.15	8.13
Electrical conductivity	µS/cm	1160	1155	1162	1174	1163	1162	1160	1161	1161	1163	1158	1157	1153

Table S2b. The results of the surface coagulation - Experiment 2

Parameter	Unit	WWTP wastewater	Dose of $Al_2(SO_4)_3$ [mg Al/L]				Dose of PAX-XL 19F [mg Al/L]				Dose of PAX-XL 1911 [mg Al/L]			
			0.25	0.5	1	2	0.25	0.5	1	2	0.25	0.5	1	2
N	mg/l	6.507	6.507	6.048	5.988	5.886	5.832	5.457	5.404	5.377	5.355	5.387	5.296	5.253
P	mg/l	0.47	0.20	0.15	0.13	0.12	0.30	0.25	0.15	0.09	0.22	0.16	0.13	0.12
K	mg/l	33.9	28.1				29.5				28.1			
Turbidity	NTU	2.31	2.31	0.92	0.73	0.68	0.65	0.82	0.73	0.61	0.59	0.91	0.76	0.55
pH	-	7.35	7.35	8.08	8.06	8.00	7.92	7.98	7.96	7.95	7.94	8.00	7.97	7.96
Electrical conductivity	µS/cm	1160	1160	1139	1128	1123	1119	1125	1115	1116	1117	1144	1130	1123

Table S3a. The results of the volumetric coagulation - Experiment 3

Parameter	Unit	WWTP wastewater	Dose of $Al_2(SO_4)_3$ [mg Al/L]				Dose of PAX-XL 19F [mg Al/L]				Dose of PAX-XL 1911 [mg Al/L]			
			1	2	4	8	1	2	4	8	1	2	4	8
N	mg/l	7.876	7.706	7.487	7.461	7.427	6.83	6.702	6.649	6.632	6.781	6.776	6.772	6.77
P	mg/l	0.96	0.42	0.18	0.05	0.03	0.64	0.46	0.26	0.07	0.61	0.45	0.24	0.07
K	mg/l	34.7	33.8				34.5				34.3			
Turbidity	NTU	2.07	0.65	0.46	0.45	0.46	0.57	0.53	0.5	0.53	0.63	0.47	0.37	0.34
pH	-	7.43	7.78	7.77	7.63	7.45	7.84	7.9	7.9	7.89	7.9	7.94	7.88	7.87
Electrical conductivity	µS/cm	1203	1207	1208	1208	1218	1203	1202	1202	1198	1200	1200	1200	1198

Table S3b. The results of the surface coagulation - Experiment 3

Parameter	Unit	WWTP wastewater	Dose of $Al_2(SO_4)_3$ [mg Al/L]				Dose of PAX-XL 19F [mg Al/L]				Dose of PAX-XL 1911 [mg Al/L]			
			0.25	0.5	1	2	0.25	0.5	1	2	0.25	0.5	1	2
N	mg/l	7.876	7.016	6.952	6.889	6.851	6.431	6.363	6.298	6.264	6.487	6.485	6.457	6.443
P	mg/l	0.96	0.47	0.42	0.32	0.25	0.57	0.53	0.41	0.38	0.50	0.48	0.38	0.29
K	mg/l	34.7	30.2				31.9				31.4			
Turbidity	NTU	2.07	0.54	0.5	0.47	0.51	0.72	0.68	0.54	0.53	0.64	0.62	0.48	0.5
pH	-	7.43	7.88	7.87	7.82	7.75	7.85	7.89	7.9	7.85	7.85	7.84	7.91	7.85
Electrical conductivity	µS/cm	1203	1167	1166	1160	1156	1180	1163	1163	1163	1169	1160	1165	1167