



**Figure S1.** Process flux in preliminary experiments with AF effluents and RO membranes. The RO membrane was GE AE, with circular disk of 76 mm used in a dead-end filtration cell. The pressure applied was 60 bar and the clean water flux was  $14.7 \text{ L m}^{-2} \text{ h}^{-1}$  at 60 bar. The sample was the effluent of lab-scale AF process, with a total SCOA concentration of 7.4 g/L, mainly composed of acetic and lactic acids. The conductivity of the feed was 4.48 mS, of the overall concentrate was 17.64 mS and of the overall permeate was 0.161 mS.

More experimental information is available from: S. Simonetti (2022). Anaerobic fermentation of food waste for the production of chemicals. Chapter 7. Concentration of fermentation products via reverse osmosis membrane filtration. PhD thesis, University of Aberdeen.

The membrane filtration experiments were conducted by the company Membranology LTD, C/O Azets, Ty Caer Wyr Charter Court, Phoenix Way, Enterprise Park, Swansea, United Kingdom, SA7 9FS.

**Table S1.** Simulation results for steams 1-8 in the process scheme (Figure 1, main body of the manuscript). Conditions indicated as “-” refer to columns which were not simulated, i.e. column 1 for total concentration of SCOAs 100 g/kg and water removed 900 t/d (no water to be removed by distillation) and column 3 for composition 3 (only acetic and propionic acids).

Composition 1, 10 g/kg. Water removed by RO membranes (t/d): 0 Reflux ratios for columns 1, 2, 3: 0.55, 16, 3.8, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	181.90	117.49	201.40	140.80	216.13
Total flow rate (t/d)	1,000	1,000	990	10	1	9	1	8
Composition (% w/w)								
Acetic	0.10	0.10	0	9.941	99.00	0.05	0.419	0
Lactic	0.80	0.80	0	80.00	0	88.89	0.580	99.93
Propionic	0.10	0.10	0	0.10	0.412	11.06	99.00	0.07
Water	99.00	99.00	99.9994	0.059	0.586	0	0	0
Composition 1, 10 g/kg. Water removed by RO membranes (t/d): 100 Reflux ratios for columns 1, 2, 3: 0.55, 16, 3.8, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	181.91	117.49	201.43	140.80	216.13
Total flow rate (t/d)	1,000	900	890	10	1	9	1	8
Composition (% w/w)								
Acetic	0.10	0.111	0.0007	9.942	99.00	0.0465	0.419	0
Lactic	0.80	0.888	0	80.00	0	88.89	0.580	99.93
Propionic	0.10	0.111	0	10.00	0.419	11.06	99.00	0.07
Water	99.00	98.89	99.9993	0.058	0.579	0	0	0
Composition 1, 10 g/kg. Water removed by RO membranes (t/d): 200 Reflux ratios for columns 1, 2, 3: 0.54, 16, 3.8, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	181.91	117.49	201.43	140.80	216.13
Total flow rate (t/d)	1,000	800	790	10	1	9	1	8
Composition (% w/w)								
Acetic	0.10	0.125	0.0007	9.942	99.00	0.0465	0.419	0
Lactic	0.80	1.00	0	80.00	0	88.89	0.580	99.93
Propionic	0.10	0.125	0	10.00	0.419	11.06	99.00	0.07
Water	99.00	98.75	99.9993	0.058	0.580	0	0	0
Composition 1, 10 g/kg. Water removed by RO membranes (t/d): 300 Reflux ratios for columns 1, 2, 3: 0.53, 16, 3.8, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	181.91	117.49	201.40	140.80	216.12
Total flow rate (t/d)	1,000	700	690	10	1	9	1	8
Composition (% w/w)								
Acetic	0.10	0.143	0.0008	9.942	99.00	0.0465	0.419	0
Lactic	0.80	1.143	0	80.00	0	88.89	0.581	99.93
Propionic	0.10	0.143	0	10.00	0.419	11.06	99.00	0.07
Water	99.00	98.57	99.9992	0.058	0.580	0	0	0
Composition 1, 10 g/kg. Water removed by RO membranes (t/d): 400 Reflux ratios for columns 1, 2, 3: 0.52, 16, 3.8, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	181.91	117.49	201.40	140.80	216.12
Total flow rate (t/d)	1,000	600	590	10	1	9	1	8
Composition (% w/w)								
Acetic	0.10	0.167	0.001	9.942	99.00	0.0465	0.419	0
Lactic	0.80	1.33	0	80.00	0	88.89	0.581	99.93
Propionic	0.10	0.167	0	10.00	0.419	11.06	99.00	0.07
Water	99.00	98.33	99.999	0.058	0.580	0	0	0

Composition 1, 10 g/kg. Water removed by RO membranes (t/d): 500 Reflux ratios for columns 1, 2, 3: 0.51, 16, 3.8, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	181.91	117.49	201.40	140.80	216.12
Total flow rate (t/d)	1,000	500	490	10	1	9	1	8
Composition (% w/w)								
Acetic	0.10	0.20	0.0012	9.942	99.00	0.0465	0.419	0
Lactic	0.80	1.60	0	80.00	0	88.89	0.581	99.93
Propionic	0.10	0.20	0	10.00	0.419	11.06	99.00	0.07
Water	99.00	98.00	99.9988	0.058	0.580	0	0	0
Composition 1, 10 g/kg. Water removed by RO membranes (t/d): 600 Reflux ratios for columns 1, 2, 3: 0.49, 16, 3.8, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	181.91	117.49	201.40	140.80	216.12
Total flow rate (t/d)	1,000	400	390	10	1	9	1	8
Composition (% w/w)								
Acetic	0.10	0.25	0.0015	9.942	99.00	0.0465	0.419	0
Lactic	0.80	2.00	0	80.00	0	88.89	0.581	99.93
Propionic	0.10	0.25	0	10.00	0.419	11.06	99.00	0.07
Water	99.00	97.50	99.9985	0.058	0.580	0	0	0
Composition 1, 10 g/kg. Water removed by RO membranes (t/d): 700 Reflux ratios for columns 1, 2, 3: 0.47, 16, 3.8, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	181.91	117.49	201.40	140.80	216.12
Total flow rate (t/d)	1,000	300	290	10	1	9	1	8
Composition (% w/w)								
Acetic	0.10	0.33	0.0020	9.942	99.00	0.0465	0.419	0
Lactic	0.80	2.67	0	80.00	0	88.89	0.581	99.93
Propionic	0.10	0.33	0	10.00	0.419	11.06	99.00	0.07
Water	99.00	96.67	99.998	0.058	0.580	0	0	0
Composition 1, 10 g/kg. Water removed by RO membranes (t/d): 800 Reflux ratios for columns 1, 2, 3: 0.45, 16, 3.8, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	181.91	117.49	201.40	140.80	216.12
Total flow rate (t/d)	1,000	200	190	10	1	9	1	8
Composition (% w/w)								
Acetic	0.10	0.50	0.0031	9.942	99.00	0.0465	0.419	0
Lactic	0.80	4.00	0	80.00	0	88.89	0.581	99.93
Propionic	0.10	0.50	0	10.00	0.419	11.06	99.00	0.07
Water	99.00	95.00	99.9969	0.058	0.580	0	0	0
Composition 1, 10 g/kg. Water removed by RO membranes (t/d): 900 Reflux ratios for columns 1, 2, 3: 0.41, 16, 3.8, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	181.91	117.49	201.40	140.80	216.12
Total flow rate (t/d)	1,000	100	90	10	1	9	1	8
Composition (% w/w)								
Acetic	0.10	1.00	0.0065	9.942	99.00	0.0465	0.419	0
Lactic	0.80	8.00	0	80.00	0	88.89	0.581	99.93
Propionic	0.10	1.00	0	9.999	0.419	11.06	99.00	0.07
Water	99.00	90.00	99.9935	0.0584	0.584	0	0	0

Composition 1, 50 g/kg. Water removed by RO membranes (t/d): 0								
Reflux ratios for columns 1, 2, 3: 0.45, 16, 3.8, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	181.91	117.49	201.40	140.80	216.12
Total flow rate (t/d)	1,000	1,000	950	50	5	45	5	40
Composition (% w/w)								
Acetic	0.50	0.50	0.0031	9.942	99.00	0.0465	0.419	0
Lactic	4.00	4.00	0	80.00	0	88.89	0.580	99.93
Propionic	0.50	0.50	0	10.00	0.419	11.06	99.00	0.07
Water	95.00	95.00	99.9969	0.058	0.580	0	0	0
Composition 1, 50 g/kg. Water removed by RO membranes (t/d): 100								
Reflux ratios for columns 1, 2, 3: 0.44, 16, 3.8, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	181.91	117.49	201.40	140.80	216.12
Total flow rate (t/d)	1,000	900	850	50	5	45	5	40
Composition (% w/w)								
Acetic	0.50	0.555	0.0034	9.942	99.00	0.0465	0.419	0
Lactic	4.00	4.444	0	80.00	0	88.89	0.580	99.93
Propionic	0.50	0.555	0	10.00	0.419	11.06	99.00	0.07
Water	95.00	94.444	99.9966	0.058	0.580	0	0	0
Composition 1, 50 g/kg. Water removed by RO membranes (t/d): 200								
Reflux ratios for columns 1, 2, 3: 0.44, 16, 3.8, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	181.91	117.49	201.40	140.80	216.12
Total flow rate (t/d)	1,000	800	750	50	5	45	5	40
Composition (% w/w)								
Acetic	0.50	0.625	0.0038	9.942	99.00	0.0465	0.419	0
Lactic	4.00	5.00	0	80.00	0	88.89	0.580	99.93
Propionic	0.50	0.625	0	10.00	0.419	11.06	99.00	0.07
Water	95.00	93.75	99.9962	0.058	0.580	0	0	0
Composition 1, 50 g/kg. Water removed by RO membranes (t/d): 300								
Reflux ratios for columns 1, 2, 3: 0.43, 16, 3.8, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	181.91	117.49	201.40	140.80	216.12
Total flow rate (t/d)	1,000	700	650	50	5	45	5	40
Composition (% w/w)								
Acetic	0.50	0.714	0.0045	9.942	99.00	0.0465	0.419	0
Lactic	4.00	5.71	0	80.00	0	88.89	0.580	99.93
Propionic	0.50	0.714	0	10.00	0.419	11.06	99.00	0.07
Water	95.00	92.86	99.9955	0.058	0.580	0	0	0
Composition 1, 50 g/kg. Water removed by RO membranes (t/d): 400								
Reflux ratios for columns 1, 2, 3: 0.42, 16, 3.8, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	181.91	117.49	201.40	140.80	216.12
Total flow rate (t/d)	1,000	600	550	50	5	45	5	40
Composition (% w/w)								
Acetic	0.50	0.83	0.0053	9.942	99.00	0.0465	0.419	0
Lactic	4.00	6.67	0	80.00	0	88.89	0.580	99.93
Propionic	0.50	0.83	0	10.00	0.419	11.06	99.00	0.07
Water	95.00	91.67	99.9947	0.058	0.580	0	0	0

Composition 1, 50 g/kg. Water removed by RO membranes (t/d): 500 Reflux ratios for columns 1, 2, 3: 0.41, 16, 3.8, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	181.91	117.49	201.40	140.80	216.12
Total flow rate (t/d)	1,000	500	450	50	5	45	5	40
Composition (% w/w)								
Acetic	0.50	1.00	0.0065	9.942	99.00	0.0465	0.419	0
Lactic	4.00	8.00	0	80.00	0	88.89	0.580	99.93
Propionic	0.50	1.00	0	10.00	0.419	11.06	99.00	0.07
Water	95.00	90.00	99.9935	0.058	0.580	0	0	0
Composition 1, 50 g/kg. Water removed by RO membranes (t/d): 600 Reflux ratios for columns 1, 2, 3: 0.40, 16, 3.8, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	181.91	117.49	201.40	140.80	216.12
Total flow rate (t/d)	1,000	400	350	50	5	45	5	40
Composition (% w/w)								
Acetic	0.50	1.25	0.0083	9.942	99.00	0.0465	0.419	0
Lactic	4.00	10.00	0	80.00	0	88.89	0.580	99.93
Propionic	0.50	1.25	0	10.00	0.419	11.06	99.00	0.07
Water	95.00	87.50	99.9917	0.058	0.580	0	0	0
Composition 1, 50 g/kg. Water removed by RO membranes (t/d): 700 Reflux ratios for columns 1, 2, 3: 0.39, 16, 3.8, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	181.91	117.49	201.40	140.80	216.12
Total flow rate (t/d)	1,000	300	250	50	5	45	5	40
Composition (% w/w)								
Acetic	0.50	1.67	0.0116	9.942	99.00	0.0465	0.419	0
Lactic	4.00	13.33	0	80.00	0	88.89	0.580	99.93
Propionic	0.50	1.67	0	10.00	0.419	11.06	99.00	0.07
Water	95.00	83.33	99.9984	0.058	0.580	0	0	0
Composition 1, 50 g/kg. Water removed by RO membranes (t/d): 800 Reflux ratios for columns 1, 2, 3: 0.38, 16, 3.8, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	181.93	117.49	201.40	140.80	216.12
Total flow rate (t/d)	1,000	200	150	50	5	45	5	40
Composition (% w/w)								
Acetic	0.50	2.50	0.0189	9.942	99.00	0.0465	0.419	0
Lactic	4.00	20.00	0	80.00	0	88.89	0.580	99.93
Propionic	0.50	2.50	0	10.00	0.419	11.06	99.00	0.07
Water	95.00	75.00	99.9811	0.058	0.580	0	0	0
Composition 1, 50 g/kg. Water removed by RO membranes (t/d): 900 Reflux ratios for columns 1, 2, 3: 0.38, 16, 3.8, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	181.97	117.50	201.40	140.80	216.12
Total flow rate (t/d)	1,000	100	50	50	5	45	5	40
Composition (% w/w)								
Acetic	0.50	5	0.0535	9.942	99.00	0.0465	0.419	0
Lactic	4.00	40	0	80.00	0	88.89	0.580	99.93
Propionic	0.50	5	0	10.00	0.419	11.06	99.00	0.07
Water	95.00	50	99.9465	0.058	0.580	0	0	0

Composition 1, 100 g/kg. Water removed by RO membranes (t/d): 0 Reflux ratios for columns 1, 2, 3: 0.41, 16, 3.8, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	181.91	117.49	201.40	140.80	216.12
Total flow rate (t/d)	1,000	1,000	900	100	10	90	10	80
Composition (% w/w)								
Acetic	1.00	1.00	0.0065	9.942	99.00	0.0465	0.419	0
Lactic	8.00	8.00	0	80.00	0	88.89	0.581	99.93
Propionic	1.00	1.00	0	10.00	0.584	11.06	99.00	0.07
Water	90.00	90.00	99.9935	0.0584	0.419	0	0	0
Composition 1, 100 g/kg. Water removed by RO membranes (t/d): 100 Reflux ratios for columns 1, 2, 3: 0.41, 16, 3.8, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	181.91	117.49	201.40	140.80	216.12
Total flow rate (t/d)	1,000	900	800	100	10	90	10	80
Composition (% w/w)								
Acetic	1.00	1.11	0.0072	9.942	99.00	0.0465	0.419	0
Lactic	8.00	8.89	0	80.00	0	88.89	0.581	99.93
Propionic	1.00	1.11	0	10.00	0.584	11.06	99.00	0.07
Water	90.00	88.89	99.9928	0.0584	0.419	0	0	0
Composition 1, 100 g/kg. Water removed by RO membranes (t/d): 200 Reflux ratios for columns 1, 2, 3: 0.40, 16, 3.8, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	181.91	117.49	201.40	140.80	216.12
Total flow rate (t/d)	1,000	800	700	100	10	90	10	80
Composition (% w/w)								
Acetic	1.00	1.25	0.0083	9.942	99.00	0.0465	0.419	0
Lactic	8.00	10.00	0	80.00	0	88.89	0.581	99.93
Propionic	1.00	1.25	0	10.00	0.584	11.06	99.00	0.07
Water	90.00	87.5	99.9917	0.0584	0.419	0	0	0
Composition 1, 100 g/kg. Water removed by RO membranes (t/d): 300 Reflux ratios for columns 1, 2, 3: 0.40, 16, 3.8, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	181.91	117.49	201.40	140.80	216.12
Total flow rate (t/d)	1,000	700	600	100	10	90	10	80
Composition (% w/w)								
Acetic	1.00	1.43	0.0095	9.942	99.00	0.0465	0.419	0
Lactic	8.00	11.43	0	80.00	0	88.89	0.581	99.93
Propionic	1.00	1.43	0	10.00	0.584	11.06	99.00	0.07
Water	90.00	85.71	99.9905	0.0584	0.419	0	0	0
Composition 1, 100 g/kg. Water removed by RO membranes (t/d): 400 Reflux ratios for columns 1, 2, 3: 0.39, 16, 3.8, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	181.91	117.49	201.40	140.80	216.12
Total flow rate (t/d)	1,000	600	500	100	10	90	10	80
Composition (% w/w)								
Acetic	1.00	1.67	0.0116	9.942	99.00	0.0465	0.419	0
Lactic	8.00	13.33	0	80.00	0	88.89	0.581	99.93
Propionic	1.00	1.67	0	10.00	0.584	11.06	99.00	0.07
Water	90.00	83.33	99.9884	0.0584	0.419	0	0	0

Composition 1, 100 g/kg. Water removed by RO membranes (t/d): 500 Reflux ratios for columns 1, 2, 3: 0.38, 16, 3.8, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	181.91	117.49	201.40	140.80	216.12
Total flow rate (t/d)	1,000	500	400	100	10	90	10	80
Composition (% w/w)								
Acetic	1.00	2.00	0.0146	9.942	99.00	0.0465	0.419	0
Lactic	8.00	16.00	0	80.00	0	88.89	0.581	99.93
Propionic	1.00	2.00	0	10.00	0.584	11.06	99.00	0.07
Water	90.00	80.00	99.9854	0.0584	0.419	0	0	0
Composition 1, 100 g/kg. Water removed by RO membranes (t/d): 600 Reflux ratios for columns 1, 2, 3: 0.38, 16, 3.8, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	181.93	117.49	201.40	140.80	216.12
Total flow rate (t/d)	1,000	400	300	100	10	90	10	80
Composition (% w/w)								
Acetic	1.00	2.50	0.0188	9.942	99.00	0.0465	0.419	0
Lactic	8.00	20.00	0	80.00	0	88.89	0.581	99.93
Propionic	1.00	2.50	0	10.00	0.584	11.06	99.00	0.07
Water	90.00	75.00	99.9811	0.0584	0.419	0	0	0
Composition 1, 100 g/kg. Water removed by RO membranes (t/d): 700 Reflux ratios for columns 1, 2, 3: 0.37, 16, 3.8, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	181.91	117.49	201.40	140.80	216.12
Total flow rate (t/d)	1,000	300	200	100	10	90	10	80
Composition (% w/w)								
Acetic	1.00	3.33	0.0287	9.942	99.00	0.0465	0.419	0
Lactic	8.00	26.67	0	80.00	0	88.89	0.581	99.93
Propionic	1.00	3.33	0	10.00	0.584	11.06	99.00	0.07
Water	90.00	66.67	99.9713	0.0584	0.419	0	0	0
Composition 1, 100 g/kg. Water removed by RO membranes (t/d): 800 Reflux ratios for columns 1, 2, 3: 0.38, 16, 3.8, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	181.97	117.49	201.40	140.80	216.12
Total flow rate (t/d)	1,000	200	100	100	10	90	10	80
Composition (% w/w)								
Acetic	1.00	5.00	0.0535	9.942	99.00	0.0465	0.419	0
Lactic	8.00	40.00	0	80.00	0	88.89	0.581	99.93
Propionic	1.00	5.00	0	10.00	0.584	11.06	99.00	0.07
Water	90.00	50.00	99.9465	0.0584	0.419	0	0	0
Composition 1, 100 g/kg. Water removed by RO membranes (t/d): 900 Reflux ratios for columns 2, 3: 5.1, 7								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	-	-	117.75	201.33	140.41	216.23
Total flow rate (t/d)	1,000	100	-	-	10	90	10	80
Composition (% w/w)								
Acetic	1.00	10.00	-	-	99.00	0.11	0.992	0
Lactic	8.00	80.00	-	-	0	88.89	0	100
Propionic	1.00	10.00	-	-	0.992	11.00	99.00	0
Water	90.00	0	-	-	0	0	0	0

Composition 2, 10 g/kg. Water removed by RO membranes (t/d): 0								
Reflux ratios for columns 1, 2, 3: 0.61, 16, 1.5, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	141.49	117.37	178.30	140.63	216.23
Total flow rate (t/d)	1,000	1,000	990	10	4	6	2	4
Composition (% w/w)								
Acetic	0.40	0.40	0.0035	39.66	99.00	0.095	0.285	0
Lactic	0.40	0.40	0	40.00	0	66.67	0	0
Propionic	0.20	0.20	0	20.00	0.142	33.24	99.72	100
Water	99.00	99.00	99.9965	0.34	0.86	0	0	0
Composition 2, 10 g/kg. Water removed by RO membranes (t/d): 100								
Reflux ratios for columns 1, 2, 3: 0.61, 16, 1.5, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	141.49	117.37	178.30	140.63	216.23
Total flow rate (t/d)	1,000	900	890	10	4	6	2	4
Composition (% w/w)								
Acetic	0.40	0.44	0.0038	39.66	99.00	0.095	0.285	0
Lactic	0.40	0.44	0	40.00	0	66.67	0	0
Propionic	0.20	0.22	0	20.00	0.142	33.24	99.72	100
Water	99.00	98.89	99.9962	0.34	0.86	0	0	0
Composition 2, 10 g/kg. Water removed by RO membranes (t/d): 200								
Reflux ratios for columns 1, 2, 3: 0.60, 16, 1.5, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	141.49	117.37	178.30	140.63	216.23
Total flow rate (t/d)	1,000	800	790	10	4	6	2	4
Composition (% w/w)								
Acetic	0.40	0.50	0.0043	39.66	99.00	0.095	0.285	0
Lactic	0.40	0.50	0	40.00	0	66.67	0	0
Propionic	0.20	2.5	0	20.00	0.142	33.24	99.72	100
Water	99.00	98.75	99.9957	0.34	0.86	0	0	0
Composition 2, 10 g/kg. Water removed by RO membranes (t/d): 300								
Reflux ratios for columns 1, 2, 3: 0.59, 16, 1.5, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	141.49	117.37	178.30	140.63	216.23
Total flow rate (t/d)	1,000	700	690	10	4	6	2	4
Composition (% w/w)								
Acetic	0.40	0.572	0.0050	39.66	99.00	0.095	0.285	0
Lactic	0.40	0.572	0	40.00	0	66.67	0	0
Propionic	0.20	0.286	0	20.00	0.142	33.24	99.72	100
Water	99.00	98.57	99.9950	0.34	0.86	0	0	0
Composition 2, 10 g/kg. Water removed by RO membranes (t/d): 400								
Reflux ratios for columns 1, 2, 3: 0.58, 16, 1.5, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	141.49	117.37	178.30	140.63	216.23
Total flow rate (t/d)	1,000	600	590	10	4	6	2	4
Composition (% w/w)								
Acetic	0.40	0.67	0.0058	39.66	99.00	0.095	0.285	0
Lactic	0.40	0.67	0	40.00	0	66.67	0	0
Propionic	0.20	0.33	0	20.00	0.142	33.24	99.72	100
Water	99.00	98.33	99.9942	0.34	0.86	0	0	0



Composition 2, 10 g/kg. Water removed by RO membranes (t/d): 500 Reflux ratios for columns 1, 2, 3: 0.57, 16, 1.5, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	141.49	117.37	178.30	140.63	216.23
Total flow rate (t/d)	1,000	500	490	10	4	6	2	4
Composition (% w/w)								
Acetic	0.40	0.80	0.0070	39.66	99.00	0.095	0.285	0
Lactic	0.40	0.80	0	40.00	0	66.67	0	0
Propionic	0.20	0.40	0	20.00	0.142	33.24	99.72	100
Water	99.00	98.00	99.9930	0.34	0.86	0	0	0
Composition 2, 10 g/kg. Water removed by RO membranes (t/d): 600 Reflux ratios for columns 1, 2, 3: 0.55, 16, 1.5, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	141.49	117.37	178.30	140.63	216.23
Total flow rate (t/d)	1,000	400	390	10	4	6	2	4
Composition (% w/w)								
Acetic	0.40	1.00	0.0088	39.66	99.00	0.095	0.285	0
Lactic	0.40	1.00	0	40.00	0	66.67	0	0
Propionic	0.20	0.50	0	20.00	0.142	33.24	99.72	100
Water	99.00	97.50	99.9912	0.34	0.86	0	0	0
Composition 2, 10 g/kg. Water removed by RO membranes (t/d): 700 Reflux ratios for columns 1, 2, 3: 0.54, 16, 1.5, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	141.49	117.37	178.30	140.63	216.23
Total flow rate (t/d)	1,000	300	290	10	4	6	2	4
Composition (% w/w)								
Acetic	0.40	1.33	0.0118	39.66	99.00	0.095	0.285	0
Lactic	0.40	1.33	0	40.00	0	66.67	0	0
Propionic	0.20	0.67	0	20.00	0.142	33.24	99.72	100
Water	99.00	96.67	99.9882	0.34	0.86	0	0	0
Composition 2, 10 g/kg. Water removed by RO membranes (t/d): 800 Reflux ratios for columns 1, 2, 3: 0.52, 16, 1.5, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	141.49	117.37	178.30	140.63	216.23
Total flow rate (t/d)	1,000	200	190	10	4	6	2	4
Composition (% w/w)								
Acetic	0.40	2.00	0.0181	39.66	99.00	0.095	0.285	0
Lactic	0.40	2.00	0	40.00	0	66.67	0	0
Propionic	0.20	1.00	0	20.00	0.142	33.24	99.72	100
Water	99.00	95.00	99.9819	0.34	0.86	0	0	0
Composition 2, 10 g/kg. Water removed by RO membranes (t/d): 900 Reflux ratios for columns 1, 2, 3: 0.50, 16, 1.5, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	141.49	117.37	178.30	140.63	216.23
Total flow rate (t/d)	1,000	100	90	10	4	6	2	4
Composition (% w/w)								
Acetic	0.40	4.00	0.0382	39.66	99.00	0.095	0.285	0
Lactic	0.40	4.00	0	40.00	0	66.67	0	0
Propionic	0.20	2.00	0	20.00	0.142	33.24	99.72	100
Water	99.00	90.00	99.9617	0.34	0.86	0	0	0

Composition 2, 50 g/kg. Water removed by RO membranes (t/d): 0								
Reflux ratios for columns 1, 2, 3: 0.52, 16, 1.5, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	141.49	117.37	178.30	140.63	216.23
Total flow rate (t/d)	1,000	1,000	950	50	20	30	10	20
Composition (% w/w)								
Acetic	2.00	2.00	0.0181	39.66	99.00	0.095	0.285	0
Lactic	2.00	2.00	0	40.00	0	66.67	0	0
Propionic	1.00	1.00	0	20.00	0.142	33.24	99.72	100
Water	95.00	95.00	99.9819	0.34	0.86	0	0	0
Composition 2, 50 g/kg. Water removed by RO membranes (t/d): 100								
Reflux ratios for columns 1, 2, 3: 0.52, 16, 1.5, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	141.49	117.37	178.30	140.63	216.23
Total flow rate (t/d)	1,000	900	850	50	20	30	10	20
Composition (% w/w)								
Acetic	2.00	2.22	0.0201	39.66	99.00	0.095	0.285	0
Lactic	2.00	2.22	0	40.00	0	66.67	0	0
Propionic	1.00	1.11	0	20.00	0.142	33.24	99.72	100
Water	95.00	94.44	99.9799	0.34	0.86	0	0	0
Composition 2, 50 g/kg. Water removed by RO membranes (t/d): 200								
Reflux ratios for columns 1, 2, 3: 0.51, 16, 1.5, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	141.49	117.37	178.30	140.63	216.23
Total flow rate (t/d)	1,000	800	750	50	20	30	10	20
Composition (% w/w)								
Acetic	2.00	2.50	0.023	39.66	99.00	0.095	0.285	0
Lactic	2.00	2.50	0	40.00	0	66.67	0	0
Propionic	1.00	1.25	0	20.00	0.142	33.24	99.72	100
Water	95.00	93.75	99.977	0.34	0.86	0	0	0
Composition 2, 50 g/kg. Water removed by RO membranes (t/d): 300								
Reflux ratios for columns 1, 2, 3: 0.51, 16, 1.5, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	141.49	117.37	178.30	140.63	216.23
Total flow rate (t/d)	1,000	700	650	50	20	30	10	20
Composition (% w/w)								
Acetic	2.00	2.86	0.0264	39.66	99.00	0.095	0.285	0
Lactic	2.00	2.86	0	40.00	0	66.67	0	0
Propionic	1.00	1.43	0	20.00	0.142	33.24	99.72	100
Water	95.00	92.86	99.9736	0.34	0.86	0	0	0
Composition 2, 50 g/kg. Water removed by RO membranes (t/d): 400								
Reflux ratios for columns 1, 2, 3: 0.51, 16, 1.5, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	141.49	117.37	178.30	140.63	216.23
Total flow rate (t/d)	1,000	600	550	50	20	30	10	20
Composition (% w/w)								
Acetic	2.00	3.33	0.0310	39.66	99.00	0.095	0.285	0
Lactic	2.00	3.33	0	40.00	0	66.67	0	0
Propionic	1.00	1.67	0	20.00	0.142	33.24	99.72	100
Water	95.00	91.67	99.9690	0.34	0.86	0	0	0

Composition 2, 50 g/kg. Water removed by RO membranes (t/d): 500 Reflux ratios for columns 1, 2, 3: 0.50, 16, 1.5, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	141.49	117.37	178.30	140.63	216.23
Total flow rate (t/d)	1,000	500	450	50	20	30	10	20
Composition (% w/w)								
Acetic	2.00	4.00	0.0383	39.66	99.00	0.095	0.285	0
Lactic	2.00	4.00	0	40.00	0	66.67	0	0
Propionic	1.00	2.00	0	20.00	0.142	33.24	99.72	100
Water	95.00	90.00	99.9617	0.34	0.86	0	0	0
Composition 2, 50 g/kg. Water removed by RO membranes (t/d): 600 Reflux ratios for columns 1, 2, 3: 0.50, 16, 1.5, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	141.49	117.37	178.30	140.63	216.23
Total flow rate (t/d)	1,000	400	350	50	20	30	10	20
Composition (% w/w)								
Acetic	2.00	5.00	0.0492	39.66	99.00	0.095	0.285	0
Lactic	2.00	5.00	0	40.00	0	66.67	0	0
Propionic	1.00	2.50	0	20.00	0.142	33.24	99.72	100
Water	95.00	87.5	99.9508	0.34	0.86	0	0	0
Composition 2, 50 g/kg. Water removed by RO membranes (t/d): 700 Reflux ratios for columns 1, 2, 3: 0.51, 16, 1.5, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	141.49	117.37	178.30	140.63	216.23
Total flow rate (t/d)	1,000	300	250	50	20	30	10	20
Composition (% w/w)								
Acetic	2.00	6.67	0.0687	39.66	99.00	0.095	0.285	0
Lactic	2.00	6.67	0	40.00	0	66.67	0	0
Propionic	1.00	3.33	0	20.00	0.142	33.24	99.72	100
Water	95.00	83.33	99.9313	0.34	0.86	0	0	0
Composition 2, 50 g/kg. Water removed by RO membranes (t/d): 800 Reflux ratios for columns 1, 2, 3: 0.54, 16, 1.5, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	141.49	117.37	178.30	140.63	216.23
Total flow rate (t/d)	1,000	200	150	50	20	30	10	20
Composition (% w/w)								
Acetic	2.00	10.00	0.1145	39.66	99.00	0.095	0.285	0
Lactic	2.00	10.00	0	40.00	0	66.67	0	0
Propionic	1.00	5.00	0	20.00	0.142	33.24	99.72	100
Water	95.00	75.00	99.8855	0.34	0.86	0	0	0
Composition 2, 50 g/kg. Water removed by RO membranes (t/d): 900 Reflux ratios for columns 1, 2, 3: 0.77, 16, 1.5, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.68	141.50	117.37	178.30	140.63	216.23
Total flow rate (t/d)	1,000	100	50	50	20	30	10	20
Composition (% w/w)								
Acetic	2.00	20.00	0.3435	39.66	99.00	0.095	0.285	0
Lactic	2.00	20.00	0	40.00	0	66.67	0.041	0
Propionic	1.00	10.00	0	20.00	0.142	33.24	99.67	100
Water	95.00	50.00	99.6564	0.34	0.86	0	0	0

Composition 2, 100 g/kg. Water removed by RO membranes (t/d): 0								
Reflux ratios for columns 1, 2, 3: 0.50, 16, 1.5, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.68	141.50	117.37	178.30	140.63	216.23
Total flow rate (t/d)	1,000	1,000	900	100	40	60	20	40
Composition (% w/w)								
Acetic	4.00	4.00	0.0383	39.66	99.00	0.095	0.285	0
Lactic	4.00	4.00	0	40.00	0	66.67	0.041	0
Propionic	2.00	2.00	0	20.00	0.142	33.24	99.67	100
Water	90.00	90.00	99.9617	0.34	0.86	0	0	0
Composition 2, 100 g/kg. Water removed by RO membranes (t/d): 100								
Reflux ratios for columns 1, 2, 3: 0.50, 16, 1.5, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.68	141.50	117.37	178.30	140.63	216.23
Total flow rate (t/d)	1,000	900	800	100	40	60	20	40
Composition (% w/w)								
Acetic	4.00	4.44	0.0431	39.66	99.00	0.095	0.285	0
Lactic	4.00	4.44	0	40.00	0	66.67	0.041	0
Propionic	2.00	2.22	0	20.00	0.142	33.24	99.67	100
Water	90.00	88.89	99.9569	0.34	0.86	0	0	0
Composition 2, 100 g/kg. Water removed by RO membranes (t/d): 200								
Reflux ratios for columns 1, 2, 3: 0.50, 16, 1.5								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.68	141.50	117.37	178.30	140.63	216.23
Total flow rate (t/d)	1,000	800	700	100	40	60	20	40
Composition (% w/w)								
Acetic	4.00	5.00	0.0492	39.66	99.00	0.095	0.285	0
Lactic	4.00	5.00	0	40.00	0	66.67	0.041	0
Propionic	2.00	2.50	0	20.00	0.142	33.24	99.67	100
Water	90.00	87.50	99.9508	0.34	0.86	0	0	0
Composition 2, 100 g/kg. Water removed by RO membranes (t/d): 300								
Reflux ratios for columns 1, 2, 3: 0.59, 10, 1.5, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.68	141.50	117.37	178.30	140.63	216.23
Total flow rate (t/d)	1,000	700	600	100	40	60	20	40
Composition (% w/w)								
Acetic	4.00	5.72	0.0526	39.66	99.00	0.095	0.285	0
Lactic	4.00	5.72	0	40.00	0	66.67	0.041	0
Propionic	2.00	2.86	0	20.00	0.142	33.24	99.67	100
Water	90.00	85.71	99.9474	0.34	0.86	0	0	0
Composition 2, 100 g/kg. Water removed by RO membranes (t/d): 400								
Reflux ratios for columns 1, 2, 3: 0.59, 10, 1.5, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.68	141.50	117.37	178.30	140.63	216.23
Total flow rate (t/d)	1,000	600	500	100	40	60	20	40
Composition (% w/w)								
Acetic	4.00	6.67	0.0635	39.66	99.00	0.095	0.285	0
Lactic	4.00	6.67	0	40.00	0	66.67	0.041	0
Propionic	2.00	3.33	0	20.00	0.142	33.24	99.67	100
Water	90.00	83.33	99.9365	0.34	0.86	0	0	0

Composition 2, 100 g/kg. Water removed by RO membranes (t/d): 500 Reflux ratios for columns 1, 2, 3: 0.61, 10, 1.5, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.68	141.50	117.37	178.30	140.63	216.23
Total flow rate (t/d)	1,000	500	400	100	40	60	20	40
Composition (% w/w)								
Acetic	4.00	8.00	0.0788	39.66	99.00	0.095	0.285	0
Lactic	4.00	8.00	0	40.00	0	66.67	0.041	0
Propionic	2.00	4.00	0	20.00	0.142	33.24	99.67	100
Water	90.00	80.00	99.9211	0.34	0.86	0	0	0
Composition 2, 100 g/kg. Water removed by RO membranes (t/d): 600 Reflux ratios for columns 1, 2, 3: 0.68, 9, 1.5, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.68	141.50	117.37	178.30	140.63	216.23
Total flow rate (t/d)	1,000	400	300	100	40	60	20	40
Composition (% w/w)								
Acetic	4.00	10.00	0.102	39.66	99.00	0.095	0.285	0
Lactic	4.00	10.00	0	40.00	0	66.67	0.041	0
Propionic	2.00	5.00	0	20.00	0.142	33.24	99.67	100
Water	90.00	75.00	99.9881	0.34	0.86	0	0	0
Composition 2, 100 g/kg. Water removed by RO membranes (t/d): 700 Reflux ratios for columns 1, 2, 3: 0.74, 9, 1.5, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.68	141.50	117.37	178.30	140.63	216.23
Total flow rate (t/d)	1,000	300	200	100	40	60	20	40
Composition (% w/w)								
Acetic	4.00	13.33	0.153	39.66	99.00	0.095	0.285	0
Lactic	4.00	13.33	0	40.00	0	66.67	0.041	0
Propionic	2.00	6.67	0	20.00	0.142	33.24	99.67	100
Water	90.00	66.67	99.8469	0.34	0.86	0	0	0
Composition 2, 100 g/kg. Water removed by RO membranes (t/d): 800 Reflux ratios for columns 1, 2, 3: 0.94, 9, 1.5, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.68	141.50	117.37	178.30	140.63	216.23
Total flow rate (t/d)	1,000	200	100	100	40	60	20	40
Composition (% w/w)								
Acetic	4.00	20.00	0.307	39.66	99.00	0.095	0.285	0
Lactic	4.00	20.00	0	40.00	0	66.67	0.041	0
Propionic	2.00	10.00	0	20.00	0.142	33.24	99.67	100
Water	90.00	50.00	99.6929	0.34	0.86	0	0	0
Composition 2, 100 g/kg. Water removed by RO membranes (t/d): 900 Reflux ratios for columns 2, 3: 5, 1.5, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	-	-	117.66	178.13	140.42	216.23
Total flow rate (t/d)	1,000	100	-	-	40	60	20	40
Composition (% w/w)								
Acetic	4.00	40.00	-	-	99.51	0.32	0.972	0
Lactic	4.00	40.00	-	-	0	66.67	0.026	0
Propionic	2.00	20.00	-	-	0.486	33.00	99.00	100
Water	90.00	0	-	-	0	0	0	0

Composition 3, 10 g/kg. Water removed by RO membranes (t/d): 0 Reflux ratios for columns 1, 2: 0.99, 14, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	124.65	117.39	140.64	-	-
Total flow rate (t/d)	1,000	1,000	990	10	6	4	-	-
Composition (% w/w)								
Acetic	0.60	0.60	0.0050	59.51	99.00	0.27	-	-
Lactic	0	0	0	0	0	0	-	-
Propionic	0.40	0.40	0	40.00	0.183	99.73	-	-
Water	99.00	99.00	99.995	0.491	0.819	0	-	-
Composition 3, 10 g/kg. Water removed by RO membranes (t/d): 100 Reflux ratios for columns 1, 2: 0.98, 14, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	124.65	117.39	140.64	-	-
Total flow rate (t/d)	1,000	900	890	10	6	4	-	-
Composition (% w/w)								
Acetic	0.60	0.67	0.0055	59.51	99.00	0.27	-	-
Lactic	0	0	0	0	0	0	-	-
Propionic	0.40	0.44	0	40.00	0.183	99.73	-	-
Water	99.00	98.89	99.9945	0.491	0.819	0	-	-
Composition 3, 10 g/kg. Water removed by RO membranes (t/d): 200 Reflux ratios for columns 1, 2: 0.97, 14, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	124.65	117.39	140.64	-	-
Total flow rate (t/d)	1,000	800	790	10	6	4	-	-
Composition (% w/w)								
Acetic	0.60	0.75	0.0062	59.51	99.00	0.27	-	-
Lactic	0	0	0	0	0	0	-	-
Propionic	0.40	0.50	0	40.00	0.183	99.73	-	-
Water	99.00	98.75	99.9938	0.491	0.819	0	-	-
Composition 3, 10 g/kg. Water removed by RO membranes (t/d): 300 Reflux ratios for columns 1, 2: 0.96, 14, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	124.65	117.39	140.64	-	-
Total flow rate (t/d)	1,000	700	690	10	6	4	-	-
Composition (% w/w)								
Acetic	0.60	0.857	0.0071	59.51	99.00	0.27	-	-
Lactic	0	0	0	0	0	0	-	-
Propionic	0.40	0.571	0	40.00	0.183	99.73	-	-
Water	99.00	98.57	99.9929	0.491	0.819	0	-	-
Composition 3, 10 g/kg. Water removed by RO membranes (t/d): 400 Reflux ratios for columns 1, 2: 0.95, 14, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	124.65	117.39	140.64	-	-
Total flow rate (t/d)	1,000	600	590	10	6	4	-	-
Composition (% w/w)								
Acetic	0.60	1.00	0.0083	59.51	99.00	0.27	-	-
Lactic	0	0	0	0	0	0	-	-
Propionic	0.40	0.67	0	40.00	0.183	99.73	-	-
Water	99.00	98.33	99.9917	0.491	0.819	0	-	-

Composition 3, 10 g/kg. Water removed by RO membranes (t/d): 500 Reflux ratios for columns 1, 2: 0.94, 14, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	124.65	117.39	140.64	-	-
Total flow rate (t/d)	1,000	500	490	10	6	4	-	-
Composition (% w/w)								
Acetic	0.60	1.20	0.0100	59.51	99.00	0.27	-	-
Lactic	0	0	0	0	0	0	-	-
Propionic	0.40	0.80	0	40.00	0.183	99.73	-	-
Water	99.00	98.00	99.990	0.491	0.819	0	-	-
Composition 3, 10 g/kg. Water removed by RO membranes (t/d): 600 Reflux ratios for columns 1, 2: 0.93, 14, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	124.65	117.39	140.64	-	-
Total flow rate (t/d)	1,000	400	390	10	6	4	-	-
Composition (% w/w)								
Acetic	0.60	1.50	0.0126	59.51	99.00	0.27	-	-
Lactic	0	0	0	0	0	0	-	-
Propionic	0.40	1	0	40.00	0.183	99.73	-	-
Water	99.00	97.50	99.9874	0.491	0.819	0	-	-
Composition 3, 10 g/kg. Water removed by RO membranes (t/d): 700 Reflux ratios for columns 1, 2: 0.92, 14, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	124.65	117.39	140.64	-	-
Total flow rate (t/d)	1,000	300	290	10	6	4	-	-
Composition (% w/w)								
Acetic	0.60	2.00	0.0170	59.51	99.00	0.27	-	-
Lactic	0	0	0	0	0	0	-	-
Propionic	0.40	1.33	0	40.00	0.183	99.73	-	-
Water	99.00	96.67	99.9830	0.491	0.819	0	-	-
Composition 3, 10 g/kg. Water removed by RO membranes (t/d): 800 Reflux ratios for columns 1, 2: 0.92, 14, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	124.65	117.39	140.64	-	-
Total flow rate (t/d)	1,000	200	190	10	6	4	-	-
Composition (% w/w)								
Acetic	0.60	3.00	0.0259	59.51	99.00	0.27	-	-
Lactic	0	0	0	0	0	0	-	-
Propionic	0.40	2.00	0	40.00	0.183	99.73	-	-
Water	99.00	95.00	99.9741	0.493	0.822	0	-	-
Composition 3, 10 g/kg. Water removed by RO membranes (t/d): 900 Reflux ratios for columns 1, 2: 0.97, 14, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	124.65	117.39	140.64	-	-
Total flow rate (t/d)	1,000	100	90	10	6	4	-	-
Composition (% w/w)								
Acetic	0.60	6.00	0.0547	59.51	99.00	0.27	-	-
Lactic	0	0	0	0	0	0	-	-
Propionic	0.40	4.00	0	40.00	0.183	99.73	-	-
Water	99.00	90.00	99.9453	0.491	0.821	0	-	-

Composition 3, 50 g/kg. Water removed by RO membranes (t/d): 0 Reflux ratios for columns 1, 2: 0.96, 13, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	124.66	117.39	140.63	-	-
Total flow rate (t/d)	1,000	1,000	950	50	30	20	-	-
Composition (% w/w)								
Acetic	3.00	3.00	0.02556	59.51	99.00	0.29	-	-
Lactic	0	0	0	0	0	0	-	-
Propionic	2.00	2.00	0	40.00	0.194	99.71	-	-
Water	95.00	95.00	99.9744	0.486	0.81	0	-	-
Composition 3, 50 g/kg. Water removed by RO membranes (t/d): 100 Reflux ratios for columns 1, 2: 0.96, 13, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	124.66	117.39	140.63	-	-
Total flow rate (t/d)	1,000	900	850	50	30	20	-	-
Composition (% w/w)								
Acetic	3.00	3.33	0.0286	59.51	99.00	0.29	-	-
Lactic	0	0	0	0	0	0	-	-
Propionic	2.00	2.22	0	40.00	0.194	99.71	-	-
Water	95.00	94.44	99.9714	0.486	0.81	0	-	-
Composition 3, 50 g/kg. Water removed by RO membranes (t/d): 200 Reflux ratios for columns 1, 2: 0.97, 13, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	124.66	117.39	140.63	-	-
Total flow rate (t/d)	1,000	800	750	50	30	20	-	-
Composition (% w/w)								
Acetic	3.00	3.75	0.0324	59.51	99.00	0.29	-	-
Lactic	0	0	0	0	0	0	-	-
Propionic	2.00	2.50	0	40.00	0.194	99.71	-	-
Water	95.00	93.75	99.9676	0.486	0.81	0	-	-
Composition 3, 50 g/kg. Water removed by RO membranes (t/d): 300 Reflux ratios for columns 1, 2: 0.98, 13, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	124.66	117.39	140.63	-	-
Total flow rate (t/d)	1,000	700	650	50	30	20	-	-
Composition (% w/w)								
Acetic	3.00	4.29	0.0373	59.51	99.00	0.29	-	-
Lactic	0	0	0	0	0	0	-	-
Propionic	2.00	2.86	0	40.00	0.194	99.71	-	-
Water	95.00	92.86	99.9627	0.486	0.81	0	-	-
Composition 3, 50 g/kg. Water removed by RO membranes (t/d): 400 Reflux ratios for columns 1, 2: 0.99, 13, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	124.66	117.39	140.63	-	-
Total flow rate (t/d)	1,000	600	550	50	30	20	-	-
Composition (% w/w)								
Acetic	3.00	5.00	0.0441	59.51	99.00	0.29	-	-
Lactic	0	0	0	0	0	0	-	-
Propionic	2.00	3.33	0	40.00	0.194	99.71	-	-
Water	95.00	91.66	99.9559	0.486	0.81	0	-	-



Composition 3, 50 g/kg. Water removed by RO membranes (t/d): 500 Reflux ratios for columns 1, 2: 1.06, 12, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	124.66	117.39	140.63	-	-
Total flow rate (t/d)	1,000	500	450	50	30	20	-	-
Composition (% w/w)								
Acetic	3.00	6.00	0.0531	59.51	99.00	0.29	-	-
Lactic	0	0	0	0	0	0	-	-
Propionic	2.00	4.00	0	40.00	0.194	99.71	-	-
Water	95.00	90.00	99.9469	0.486	0.81	0	-	-
Composition 3, 50 g/kg. Water removed by RO membranes (t/d): 600 Reflux ratios for columns 1, 2: 1.10, 12, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	124.66	117.39	140.63	-	-
Total flow rate (t/d)	1,000	400	350	50	30	20	-	-
Composition (% w/w)								
Acetic	3.00	7.50	0.0681	59.51	99.00	0.29	-	-
Lactic	0	0	0	0	0	0	-	-
Propionic	2.00	5.00	0	40.00	0.194	99.71	-	-
Water	95.00	87.5	99.9319	0.486	0.81	0	-	-
Composition 3, 50 g/kg. Water removed by RO membranes (t/d): 700 Reflux ratios for columns 1, 2: 1.17, 12, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.67	124.66	117.40	140.63	-	-
Total flow rate (t/d)	1,000	300	250	50	30	20	-	-
Composition (% w/w)								
Acetic	3.00	10.00	0.0953	59.51	99.00	0.29	-	-
Lactic	0	0	0	0	0	0	-	-
Propionic	2.00	6.67	0	40.00	0.194	99.71	-	-
Water	95.00	83.33	99.9047	0.486	0.81	0	-	-
Composition 3, 50 g/kg. Water removed by RO membranes (t/d): 800 Reflux ratios for columns 1, 2: 1.33, 12, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.67	124.66	117.40	140.63	-	-
Total flow rate (t/d)	1,000	200	150	50	30	20	-	-
Composition (% w/w)								
Acetic	3.00	15.00	0.159	59.51	99.00	0.29	-	-
Lactic	0	0	0	0	0	0	-	-
Propionic	2.00	10.00	0	40.00	0.194	99.71	-	-
Water	95.00	75.00	99.8408	0.486	0.81	0	-	-
Composition 3, 50 g/kg. Water removed by RO membranes (t/d): 900 Reflux ratios for columns 1, 2: 2.12, 12, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.69	124.66	117.40	140.63	-	-
Total flow rate (t/d)	1,000	100	50	50	30	20	-	-
Composition (% w/w)								
Acetic	3.00	30.00	0.477	59.51	99.00	0.31	-	-
Lactic	0	0	0	0	0	0	-	-
Propionic	2.00	20.00	0	40.00	0.208	99.69	-	-
Water	95.00	50.00	99.5226	0.486	0.796	0	-	-

Composition 3, 100 g/kg. Water removed by RO membranes (t/d): 0								
Reflux ratios for columns 1, 2: 1.06, 12, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	124.66	117.40	140.63	-	-
Total flow rate (t/d)	1,000	1,000	1,000	100	60	40	-	-
Composition (% w/w)								
Acetic	6.00	6.00	0.0531	59.52	99.00	0.31	-	-
Lactic	0	0	0	0	0	0	-	-
Propionic	4.00	4.00	0	40.00	0.208	99.69	-	-
Water	90.00	90.00	99.9469	0.478	0.796	0	-	-
Composition 3, 100 g/kg. Water removed by RO membranes (t/d): 100								
Reflux ratios for columns 1, 2: 1.08, 12, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	124.66	117.40	140.63	-	-
Total flow rate (t/d)	1,000	900	800	100	60	40	-	-
Composition (% w/w)								
Acetic	6.00	6.67	0.05962	59.52	99.00	0.31	-	-
Lactic	0	0	0	0	0	0	-	-
Propionic	4.00	4.44	0	40.00	0.208	99.69	-	-
Water	90.00	88.89	99.9404	0.478	0.796	0	-	-
Composition 3, 100 g/kg. Water removed by RO membranes (t/d): 200								
Reflux ratios for columns 1, 2: 1.10, 12, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	124.66	117.40	140.63	-	-
Total flow rate (t/d)	1,000	800	700	100	60	40	-	-
Composition (% w/w)								
Acetic	6.00	7.50	0.0681	59.52	99.00	0.31	-	-
Lactic	0	0	0	0	0	0	-	-
Propionic	4.00	5.00	0	40.00	0.208	99.69	-	-
Water	90.00	87.50	99.9319	0.478	0.796	0	-	-
Composition 3, 100 g/kg. Water removed by RO membranes (t/d): 300								
Reflux ratios for columns 1, 2: 1.20, 11, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	124.66	117.40	140.63	-	-
Total flow rate (t/d)	1,000	700	600	100	60	40	-	-
Composition (% w/w)								
Acetic	6.00	8.57	0.0777	59.52	99.00	0.31	-	-
Lactic	0	0	0	0	0	0	-	-
Propionic	4.00	5.71	0	40.00	0.208	99.69	-	-
Water	90.00	85.71	99.9223	0.478	0.796	0	-	-
Composition 3, 100 g/kg. Water removed by RO membranes (t/d): 400								
Reflux ratios for columns 1, 2: 1.24, 11, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.66	124.66	117.40	140.63	-	-
Total flow rate (t/d)	1,000	600	500	100	60	40	-	-
Composition (% w/w)								
Acetic	6.00	10.00	0.0934	59.52	99.00	0.31	-	-
Lactic	0	0	0	0	0	0	-	-
Propionic	4.00	6.67	0	40.00	0.208	99.69	-	-
Water	90.00	83.33	99.9066	0.478	0.796	0	-	-

Composition 3, 100 g/kg. Water removed by RO membranes (t/d): 500 Reflux ratios for columns 1, 2: 1.31, 11, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.67	124.66	117.40	140.63	-	-
Total flow rate (t/d)	1,000	500	400	100	60	40	-	-
Composition (% w/w)								
Acetic	6.00	12.00	0.1165	59.52	99.00	0.31	-	-
Lactic	0	0	0	0	0	0	-	-
Propionic	4.00	8.00	0	40.00	0.208	99.69	-	-
Water	90.00	80.00	99.8835	0.478	0.796	0	-	-
Composition 3, 100 g/kg. Water removed by RO membranes (t/d): 600 Reflux ratios for columns 1, 2: 1.42, 11, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.67	124.66	117.40	140.63	-	-
Total flow rate (t/d)	1,000	400	300	100	60	40	-	-
Composition (% w/w)								
Acetic	6.00	15.00	0.155	59.52	99.00	0.31	-	-
Lactic	0	0	0	0	0	0	-	-
Propionic	4.00	10.00	0	40.00	0.208	99.69	-	-
Water	90.00	75.00	99.8447	0.478	0.796	0	-	-
Composition 3, 100 g/kg. Water removed by RO membranes (t/d): 700 Reflux ratios for columns 1, 2: 1.63, 11, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.67	124.67	117.40	140.62	-	-
Total flow rate (t/d)	1,000	300	200	100	60	40	-	-
Composition (% w/w)								
Acetic	6.00	20.00	0.2332	59.52	99.00	0.31	-	-
Lactic	0	0	0	0	0	0	-	-
Propionic	4.00	13.33	0	40.00	0.208	99.69	-	-
Water	90.00	66.67	99.7668	0.478	0.796	0	-	-
Composition 3, 100 g/kg. Water removed by RO membranes (t/d): 800 Reflux ratios for columns 1, 2: 2.22, 11, respectively.								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	99.69	124.67	117.40	140.62	-	-
Total flow rate (t/d)	1,000	200	100	100	60	40	-	-
Composition (% w/w)								
Acetic	6.00	30.00	0.4663	59.53	99.00	0.31	-	-
Lactic	0	0	0	0	0	0	-	-
Propionic	4.00	20.00	0	40.00	0.226	99.69	-	-
Water	90.00	50.00	99.5337	0.466	0.777	0	-	-
Composition 3, 100 g/kg. Water removed by RO membranes (t/d): 900 Reflux ratios for column 2: 5.1								
Variable	1	2	3	4	5	6	7	8
Temperature (°C)	25	25	-	-	117.68	140.41	-	-
Total flow rate (t/d)	1,000	100	-	-	60	40	-	-
Composition (% w/w)								
Acetic	6.00	60	-	-	99.35	0.973	-	-
Lactic	0	0	-	-	0	0	-	-
Propionic	4.00	40	-	-	0.65	99.03	-	-
Water	90.00	0	-	-	0	0	-	-