

Constituents of Coliform Species Contained in the Permeate of Microfiltration Membranes in Wastewater Treatment

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Supplementary Information

Table S1. The results of identifications, microscopic observations, origins (RUN no. and the elapsed time) of the isolates obtained from the permeate of membranes.

Genera	16S rRNA sequencing		Microscopic observation		Origin of the isolate			
	Species with high similarity (number of isolates)	Accession number	Size (μm)	Gram staining	Membrane pore sizes			Experimental RUN
					0.2μm	0.4μm	0.8μm	
Serratia	S. oryzae(3)							
	NB-1	PP396550	1.28 x 0.63	N			3h	1
	NB-2	PP396551	1.54 x 0.82	N			5h	1
	ND-3	PP396568	1.02 x 0.66	N			5h	2
	S. marcescens(2)							
	NH-17	PP396613	0.95 x 0.75	N			72h	4
	NJ-01	PP396626	1.00 x 0.77				1h	5
Enterobacter	E. tabaci(8)							
	ND-1	PP396566	0.76 x 0.58	N			1h	2
	NF-1	PP396582	0.96 x 0.63	N			1h	3
	NH-2	PP396607	1.03 x 0.79	N			3h	4
	NH-4	PP396609	0.67 x 0.49	N			5h	4
	NH-12	PP396611	0.89 x 0.62	N			24h	4
	NH-20	PP396614	0.81 x 0.63	N			96h	4
	NJ-3	PP396627	0.94 x 0.68	N		3h		5
	NJ-17	PP396632	1.02 x 0.72	N			24h	5
	E. ludwigii(7)							
	ND-4	PP396569	1.04 x 0.78				24h	2
	NF-10	PP396583	0.94 x 0.75	N		120h		3
	NF-11	PP396584	0.86 x 0.68	N		120h		3
	NF-12	PP396585	1.09 x 0.84	N		120h		3
	NF-13	PP396586	1.10 x 0.90	N		120h		3
	NF-14	PP396587	0.92 x 0.74	N		120h		3
	NF-15	PP396588	1.08 x 0.76	N		120h		3
	NF-16	PP396589	1.01 x 0.59	N		120h		3
	E. kobei(2)							
	NH-1	PP396606	0.91 x 0.70	N			1h	4
	NJ-16	PP396631	1.14 x 0.84	N			24h	5
	Kluyvera	K. ascorbata(1)						
ND-2		PP396567	1.00 x 0.71	N			1h	2
K. georgiana(1)								

	NF-43	PP396599	0.83 x 0.69	N	168h	3
<i>Klebsiella</i>	<i>K. pneumoniae</i> (7)					
	NF-17	PP396590	1.33 x 1.04	N	120h	3
	NF-31	PP396591	1.01 x 0.71	N	120h	3
	NF-32	PP396592	0.93 x 0.64	N	120h	3
	NH-23	PP396616	0.90 x 0.69	N	120h	4
	NH-24	PP396617	1.22 x 0.78	N	120h	4
	NH-27	PP396619	0.98 x 0.74	N	120h	4
	NJ-21	PP396634	1.00 x 0.73	N	120h	5
	NJ-22	PP396635	0.95 x 0.69	N	120h	5
	<i>K. pneumoniae</i> (1)					
	NF-33	PP396593	1.00 x 0.82	N	120h	3
	<i>K. quasipneumoniae</i> (5)					
	NF-38	PP396595	0.94 x 0.73	N	168h	3
	NF-39	PP396596	0.94 x 0.76	N	168h	3
	NF-40	PP396597	0.92 x 0.73	N	168h	3
	NF-41	PP396598	0.90 x 0.70	N	168h	3
	NH-25	PP396618	1.20 x 0.89	N	120h	4
<i>Citrobacter</i>	<i>C. freundii</i> (6)					
	NH-3	PP396608	0.92 x 0.63	N	5h	4
	NH-11	PP396610	1.12 x 0.80	N	24h	4
	NH-16	PP396612	1.00 x 0.75	N	72h	4
	NJ-7	PP396628	0.97 x 0.78	N	3h	5
	NJ-12	PP396629	1.01 x 0.81	N	5h	5
	NJ-13	PP396630	1.03 x 0.75	N	5h	5
<i>Yokenella</i>	<i>Y. regensburgei</i> (1)					
	NJ-20	PP396633	1.02 x 0.80	N	48h	5
Other	<i>Pseudomonas</i> spp.					
	NF-37	PP396594		120h		3
	NH-22	PP396615			96h	4

Table S2. Bacterial species identified in the activated sludge.

Genera	16S rRNA sequencing		Accession number	Origin of the isolate (Experimental RUN)
	Species with high similarity (number of isolates)			
<i>Klebsiella</i>	<i>K. pneumoniae</i> (3)			
		NA01	PP396540	1
		NA02	PP396541	1
		NC22	PP396563	2
	<i>K. quasivariicola</i> (2)			
		NA11	PP396544	1
		NG04	PP396602	4
	<i>K. quasipneumoniae</i> (1)			
		NG09	PP396604	4
<i>Escherichia/Shigella</i> spp.	(9)			
		NA06	PP396542	1
		NA14	PP396546	1

	NA15	PP396547	1
	NA16	PP396548	1
	NA17	PP396549	1
	NC05	PP396552	2
	NC17	PP396559	2
	NE03	PP396570	3
	NE11	PP396576	3
<i>Enterobacter</i>	<i>E. cancerogenus</i> (10)		
	NA10	PP396543	1
	NC07	PP396553	2
	NC08	PP396554	2
	NC09	PP396555	2
	NC12	PP396558	2
	NC19	PP396560	2
	NC21	PP396562	2
	NC23	PP396564	2
	NC24	PP396565	2
	NE07	PP396574	3
	<i>E. asburiae</i> (1)		
	NC20	PP396561	2
	<i>E. quasiroggenkampii</i> (1)		
	NE05	PP396572	3
	<i>E. ludwigii</i> (1)		
	NE06	PP396573	3
	<i>E. kobei</i> (2)		
	NE08	PP396575	3
	NI03	PP396620	5
<i>Citrobacter</i>	<i>C. amalonaticus</i> (1)		
	NA12	PP396545	1
	<i>C. europaeus</i> (2)		
	NE04	PP396571	3
	NG02	PP396600	4
	<i>C. freundii</i> (6)		
	NE12	PP396577	3
	NG08	PP396603	4
	NG10	PP396605	4
	NI04	PP396621	5
	NI05	PP396622	5
	NI10	PP396625	5
	<i>C. arsenatis</i> (2)		
	NE13	PP396578	3
	NE14	PP396579	3
	<i>C. braakii</i> (1)		
	NE15	PP396580	3
	<i>C. youngae</i> (1)		
	NI09	PP396624	5
<i>Serratia</i>	<i>S. marcescens</i> (1)		
	NC10	PP396556	2
	<i>S. oryzae</i> (1)		
	NE18	PP396581	3
<i>Aeromonas</i>	<i>A. caviae</i> (2)		
	NC11	PP396557	2
	NI08	PP396623	5
<i>Raoultella</i>	<i>R. ornithinolytica</i>		
	NG03	PP396601	4