

SUPPLEMENTARY INFORMATION

Transport of Food- and Catalytic-Grade Titanium Dioxide Nanoparticles in Controlled Field Streams with Varying Streambed and Biofilm Conditions

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Jun	Na ⁺	NH ₄ ⁺	K ⁺	Mg ²⁺	Ca ²⁺	Cl ⁻	SO ₄ ²⁻
Sand	21.0	0.3	2.7	117.9	114.7	27.0	36.7
Pea	21.9	0.0	2.4	118.6	114.0	27.8	36.8
Cobble	20.5	0.0	2.4	117.1	114.5	27.8	37.7
Mix	30.6	0.0	2.6	117.1	115.4	34.0	37.5

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Table S2. Mass recoveries, mean arrival times, and variances for all conditions tested.

NP	Streambed Media	Biofilms?	Distance	Mass Recovery (%)	Mean Arrival Time (min)	Variance (min ²)
KBr	Sand	No	20 m	83	4.2	1.1
			40 m			
	Pea Gravel	No	20 m	82	7.5	1.7
			40 m			
RWT	Cobble	No	20 m	83	13	3.5
			40 m			
	Mix	No	20 m	103	7.5	1.8
			40 m			
P90	Sand	Yes	20 m	102	3.3	9.2
			40 m	103	7.2	14
	Pea Gravel	Yes	20 m	117	7.1	26
			40 m	95	14	33
E171	Cobble	Yes	20 m	107	11	55
			40 m	96	19	56
	Mix	Yes	20 m	118	7.5	33
			40 m	106	14	44
P90	Sand	No	20 m	44	1.8	0.14
			40 m	26	3.6	0.24
	Pea Gravel	No	20 m	33	2.9	0.43
			40 m	8.9	6.0	1.0
	Cobble	No	20 m	17	5.8	0.96
			40 m	9.3	12	1.6
	Mix	No	20 m	38	3.7	0.50
			40 m	19	6.8	0.73
	Sand	Yes	20 m	9.5	2.4	0.35
			40 m	3.3	5.7	1.3
	Pea Gravel	Yes	20 m	7.3	4.2	1.1
			40 m	2.4	10	3.0
E171	Cobble	Yes	20 m	4.2	11	4.8
			40 m	2.2	18	6.3
	Mix	Yes	20 m	5.2	4.6	1.6
			40 m	1.7	9.6	2.7
E171	Sand	No	20 m	60	1.9	0.22
			40 m	54	3.9	0.51
	Pea Gravel	No	20 m	57	2.8	0.36
			40 m	35	6.8	2.1
	Cobble	No	20 m	63	6.3	1.3
			40 m	38	12	2.3
	Mix	No	20 m	63	4.0	0.69
			40 m	47	7.3	0.92
	Sand	Yes	20 m	44	2.6	0.29
			40 m	16	5.9	0.60
	Pea Gravel	Yes	20 m	35	5.7	1.6
			40 m	5.3	12	3.2
E171	Cobble	Yes	20 m	6.3	7.3	1.4
			40 m	1.7	13	0.0
	Mix	Yes	20 m	5.5	5.5	1.4
			40 m	ND	ND	ND

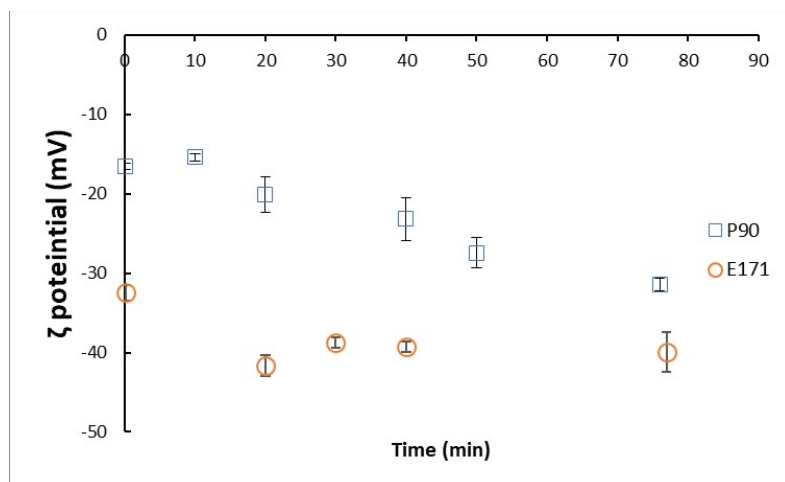


Figure S2. Zeta potential (ζ) of P90 and E171 in stream water over 75 minutes.