

Supplementary

Table S1. Analysis of the kinetic of chlorine adsorption in the two cell media by addition of different indicated amounts of chlorine. Media substrates were diluted 1:1000 ratio before tested.

NaOCl (VOL) in 5 l	Media	(mg/l)	Time (min)								
			0	2	6	14	18	53	57	123	127
6A (50 µl)	Ultra-filtrated Water	Free chlorine	0.98	0.98		0.82		0.69		0.64	
	MEM substrate	Free chlorine	0.98		0.39		0.31		0.12		0.08
	M119 substrate	Free chlorine	0.98		0.27		0.23		0.11		0.06
6B (60 µl)	Ultra-filtrated Water	Free chlorine	1.31	1.22		1.08		1.05		1.00	
	MEM substrate	Free chlorine	1.32		0.60		0.28		0.18		0.12
	M119 substrate	Free chlorine	1.29		0.54		0.28		0.19		0.13
6C (65 µl)	Ultra-filtrated Water	Free chlorine	0.65	0.57					0.48	0.46	
	MEM substrate	Free chlorine	0.72		0.07	0.07	0.06			0.05	
	M119 substrate	Free chlorine	0.71		0.14		0.08	0.06			0.05

Table S2. Analysis of the concentration of chlorine dioxide by the two different cell media by addition of 0.17 mg ClO₂/l. media substrates were diluted 1:1000 ratio before tested.

Media	Disinfectant residual (mg/l)	Time (min)												
		0	3	6	10	27	31	35	91	95	99	132	135	140
M119 substrate	ClO ₂	0.16			0.136			0.101			0.074			0.075
MEM substrate	ClO ₂	0.16		0.132			0.129			0.091			0.077	
Ultra-filtrated Water	ClO ₂	0.17	0.135			0.120			0.103			0.090		

Table S3. The total Chlorine dioxide and Chlorine concentrations calculated in water suspension with echovirus 30, simian rotavirus and adenovirus type 2 at 0, 2,10, 30, 60, and 120 minutes. The mean transmittance (254nm) was 91.4% and TOC was 2.4 mg/l before the start of the experiments. The pH and temperatures are given at the beginning and end of the experiments.

Virus	Disinfectants (mg/l)	Free chlorine after treatment (minutes)									
		pH	temp	0	2	3	6	10	30	60	120
Echovirus exp1	Chlorine dioxide	6.7-6.7	12C-21C	0.53	0.20			0.26	0.17	0.11	0.07
	Chlorine	6.7-6.8	12C-16C	1.31	0.37	0.17	0.16	0.18	0.15	0.	0.12
Echovirus exp2	Chlorine dioxide	6.7-6.7	9C-16C	0.53	0.26			0.18	0.17	0.13	0.09
	Chlorine	6.8-6.8	9C-16C	1.31	0.5			0.29	0.21	0.11	0.11
Rotavirus Exp1	Chlorine dioxide	6.7-6.8	9C-19C	0.49		0.25		0.09		0.09	<0.03
	Chlorine	6.7-6.8	9C-19C	1.2	0.53			0.41	0.25	0.14	0.10
Rotavirus exp2	Chlorine dioxide	6.7-6.7	9C-20C	0.52		0.16		0.29	0.19	0.12	0.06
	Chlorine	6.7-6.7	9C-20C	1.13	0.44			0.31	0.18	0.14	0.11
Adenovirus exp1	Chlorine dioxide	6.7-6.7	8C-17C	0.47	0.25			0.22	0.16	0.10	<0.03
	Chlorine	6.7-6.9	8C-17C	1.31	0.55			0.32	0.15	0.10	0.08
Adenovirus Exp2	Chlorine dioxide	6.7-6.7	8C-19C	0.56	0.35				0.21	0.21	0.08
	Chlorine	6.7-6.8	7C-13C	1.31	0.35			0.21	0.14	0.12	0.12

Table S4. Primers and probes used for qPCR detection of E30. R. and HAdV2.

Primers	Primer Sequences	Reference
E30-forward	TCCTCCGGCCCCCTGAATGCG	(Wang et al., 2020b)
E30-reverse1	ACCGGATGGCCAATCCAA	(Wang et al., 2020b)
E30-reverse2	ATGTCACCATAAGCAGCCA	(Wang et al., 2020b)
E30-probe	CGGAACCGACTACTTTGGGTGIC	(Wang et al., 2020b)
RV SA11-forward	ACC ATC TWC ACR TRA CCC TCT ATG AGA	(Zeng et al., 2008)
RV SA11-reverse	GGT CAC ATA ACG CCC CTA TAG C	(Zeng et al., 2008)
RV SA11-probe	[FAM] AGT TAA AAG CTA ACA CTG TCA AA [MGBEQ]	(Zeng et al., 2008)
HAdV2-forward	GCCACGGTGGGGTTTCTAAACTT	(Wang et al., 2018)
HAdV2-reverse	GCCCCAGTGGTCTTACATGCACATC	(Wang et al., 2018)
HAdV2-probe	TGCACCAGACCCGGGCTCAGGTACTCCGA	(Wang et al., 2018)