

Figure S1. Effect of temperature on the nitrification rate – series 1 (C/N = 0.5)

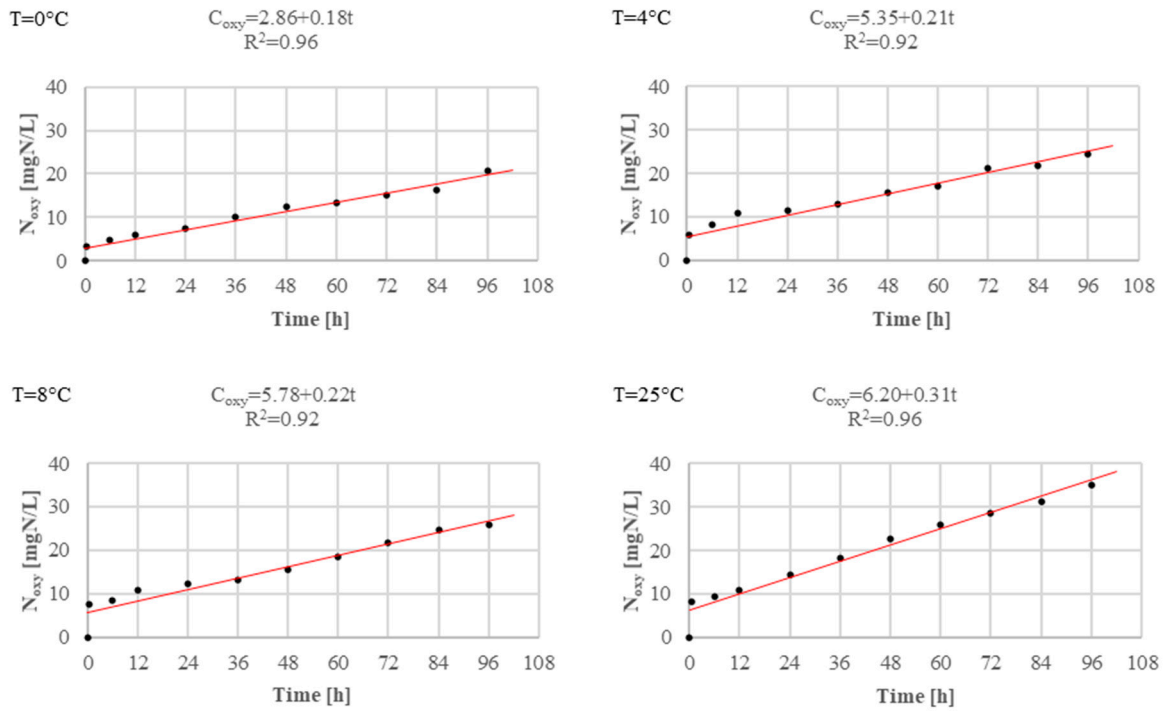


Figure S2. Effect of temperature on the nitrification rate – series 2 (C/N = 2.5)

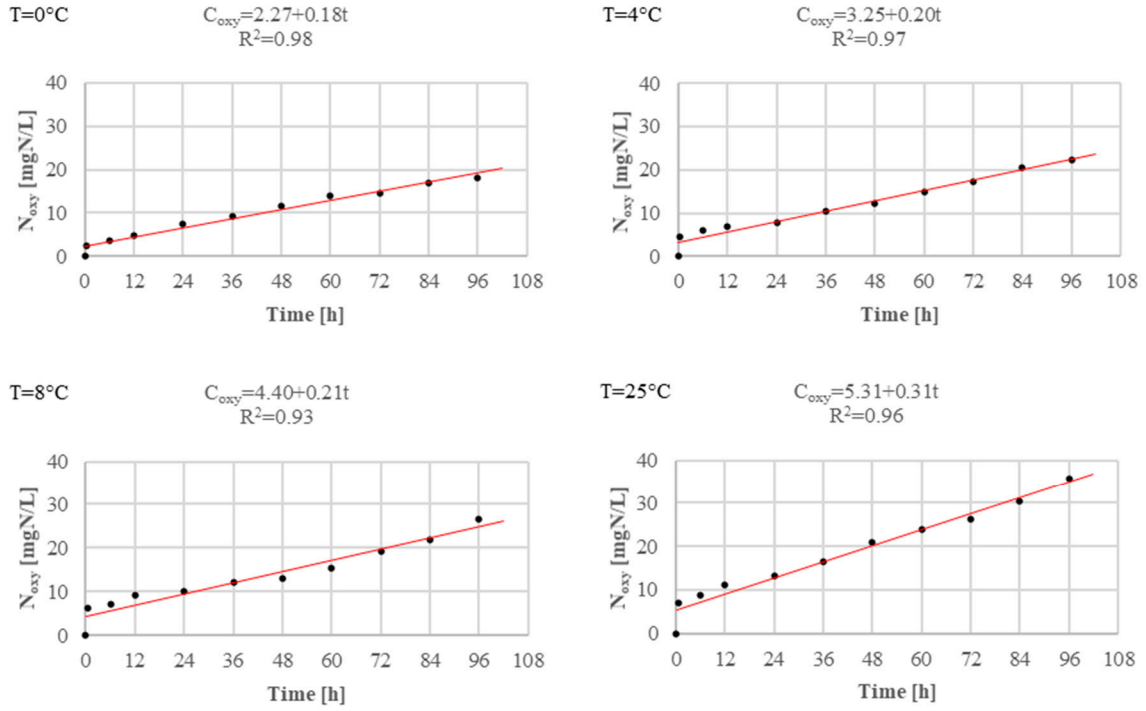


Figure S3. Effect of temperature on the nitrification rate – series 3 ($C/N = 5.0$)

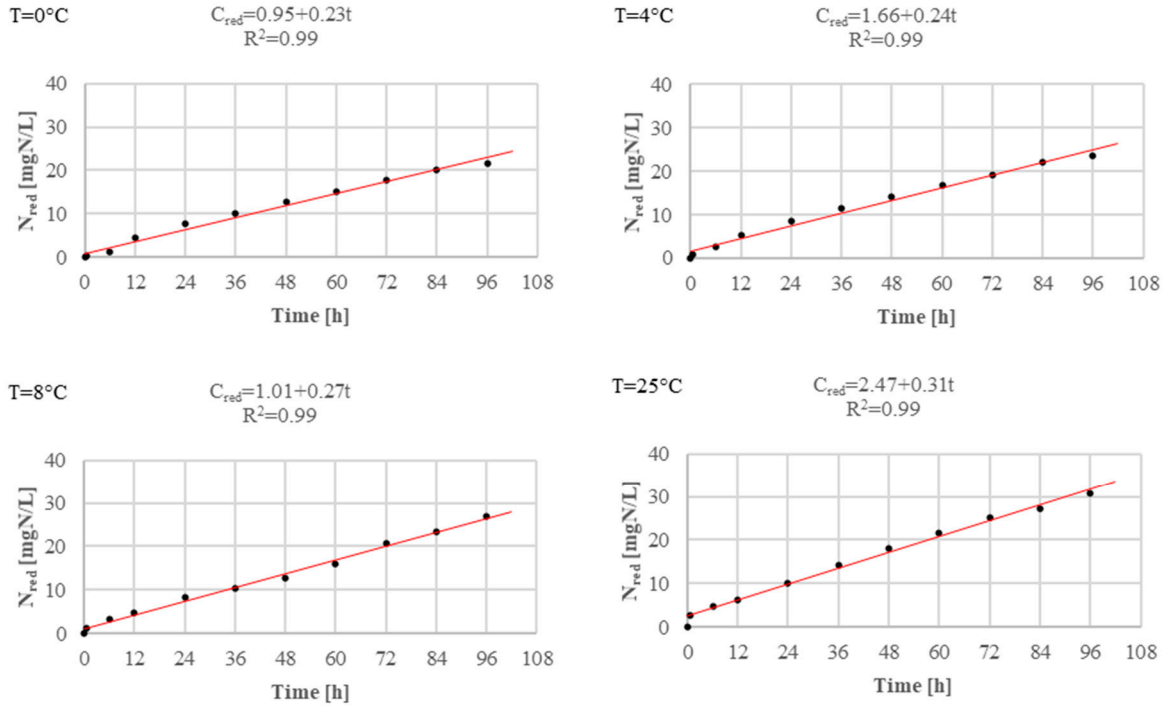


Figure S4. Effect of temperature on the denitrification rate – series 1 ($C/N = 0.5$)

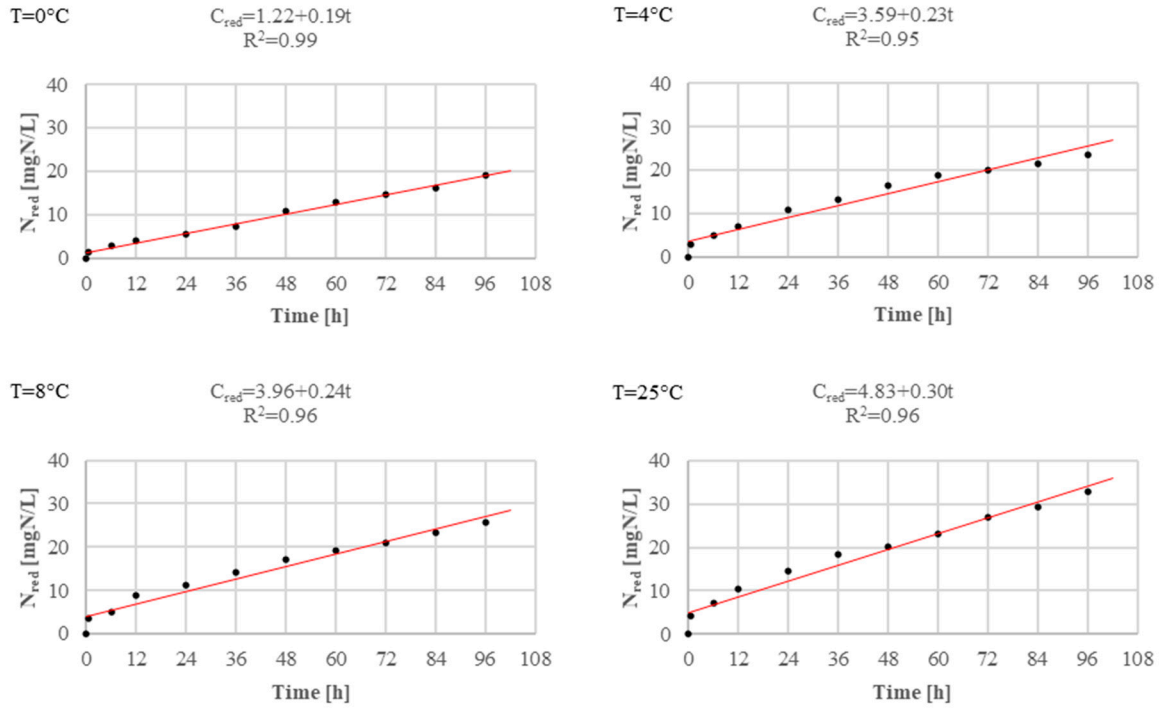


Figure S5. Effect of temperature on the denitrification rate – series 2 ($C/N = 2.5$)

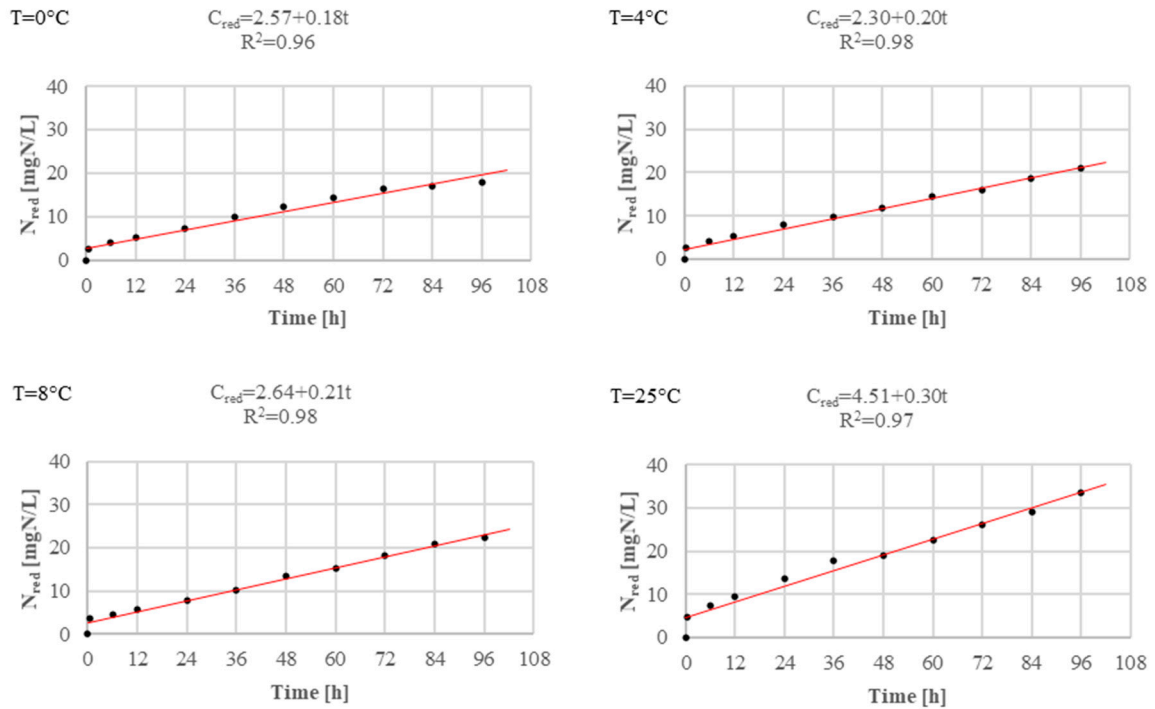


Figure S6. Effect of temperature on the denitrification rate – series 3 ($C/N = 5.0$)

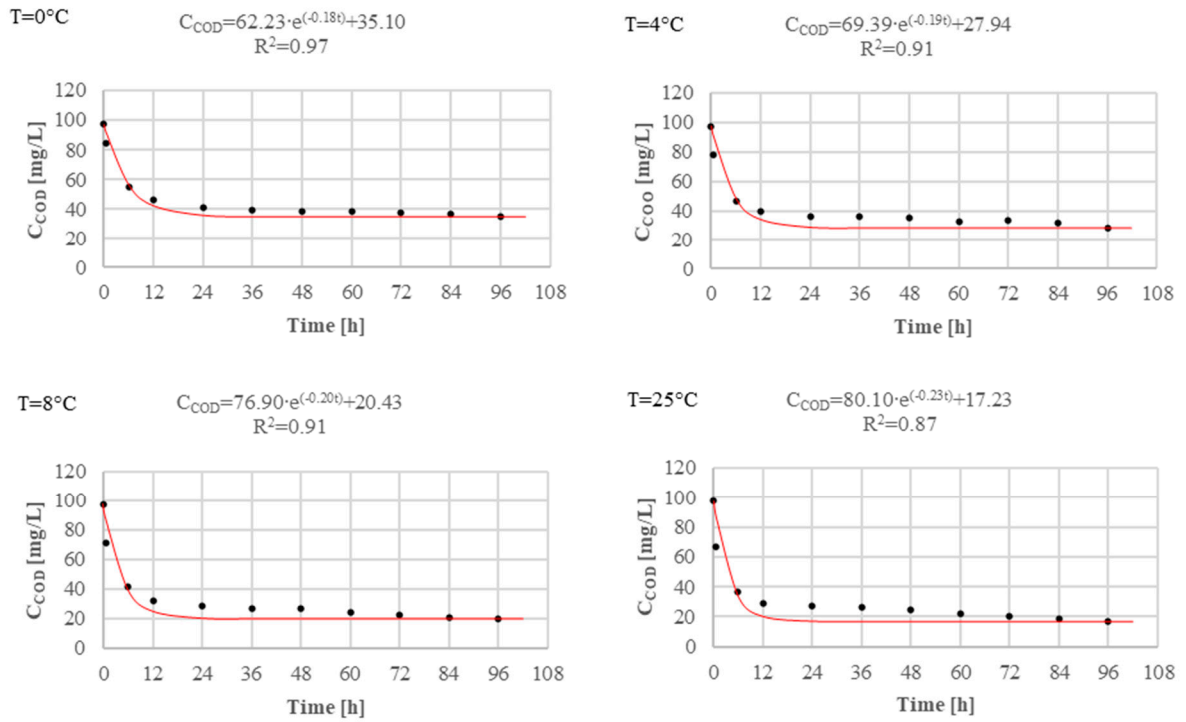


Figure S7. Effect of temperature on the organic removal rate – series 1 (C/N=0.5)

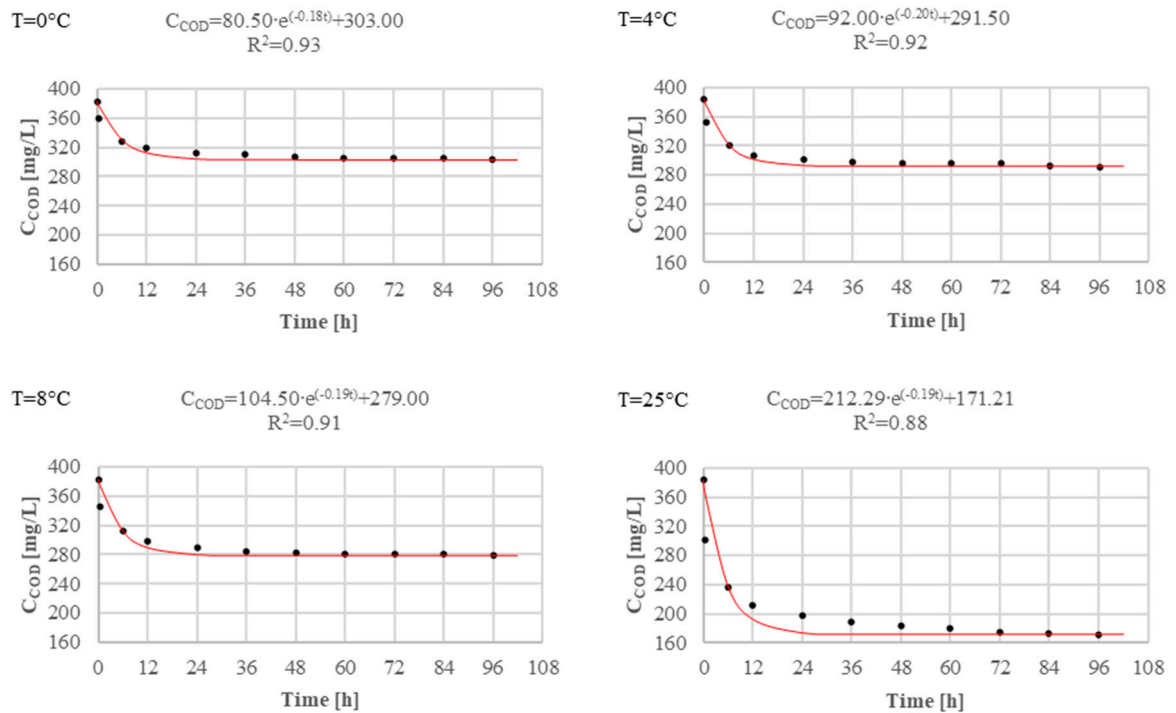


Figure S8. Effect of temperature on the organic removal rate – series 2 (C/N=2.5)

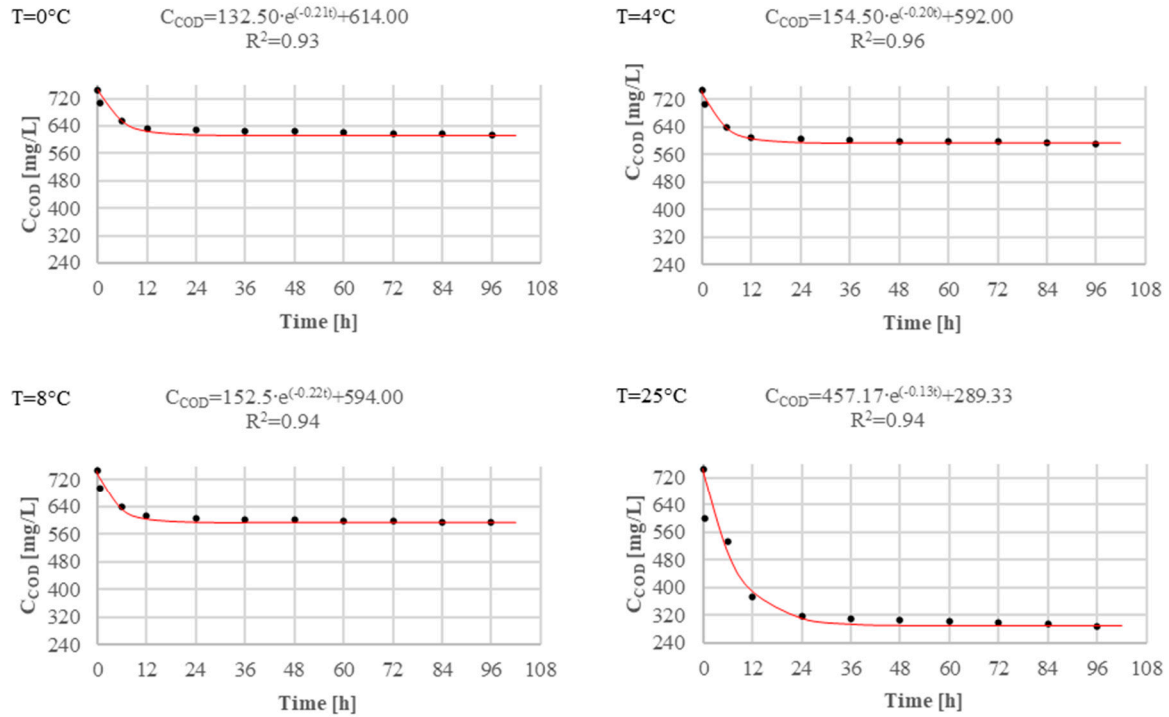


Figure S9. Effect of temperature on the organic removal rate – series 3 (C/N = 5.0)

Table S1. Goodness of fit and the rates of nitrification, denitrification, and organic compound removal depending on the adopted operating parameters of the biofilters

C/N	Temp. [°C]	Nitrification		Denitrification		Organic removal rate	
		$C_t=C_p+k \cdot t$	$C_t=C_p+k \cdot t$	$C_t=C_p \cdot e^{-k \cdot t}$	$C_t=C_p \cdot e^{-k \cdot t}$	$C_t=C_p \cdot e^{-k \cdot t}$	$C_t=C_p \cdot e^{-k \cdot t}$
		r [mg/L·h]	R ²	r [mg/L·h]	R ²	r [mg/L·h]	R ²
0.5	0	0.22	0.96	0.23	0.99	11.09	0.97
	4	0.24	0.94	0.24	0.99	14.35	0.91
	8	0.27	0.93	0.27	0.99	17.40	0.91
	25	0.32	0.94	0.31	0.99	21.33	0.87
2.5	0	0.18	0.97	0.19	0.99	14.16	0.93
	4	0.21	0.93	0.23	0.95	17.52	0.92
	8	0.22	0.92	0.24	0.97	19.77	0.91
	25	0.31	0.96	0.33	0.97	41.00	0.88
5.0	0	0.18	0.98	0.18	0.97	26.76	0.93
	4	0.20	0.97	0.20	0.98	31.49	0.96
	8	0.21	0.93	0.21	0.98	33.93	0.94
	25	0.30	0.96	0.34	0.98	58.03	0.94