Supporting Information

Nitrate Reverses Severe Nitrite Inhibition of Anaerobic Ammonium Oxidation (Anammox) Activity in Continuously-Fed Bioreactors

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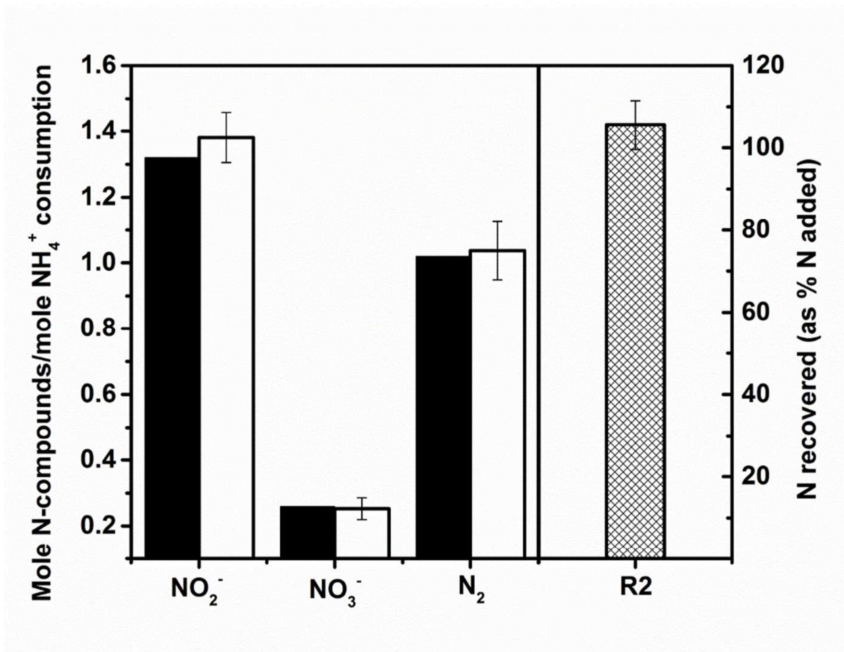

Figure S1. Reaction stoichiometry (empty bar) and N-balance (cross-hatched bar) calculated according to the data collected in period 4 to 6 in R2. Reported anammox stoichiometry (filled bar) is showed as comparison [1].

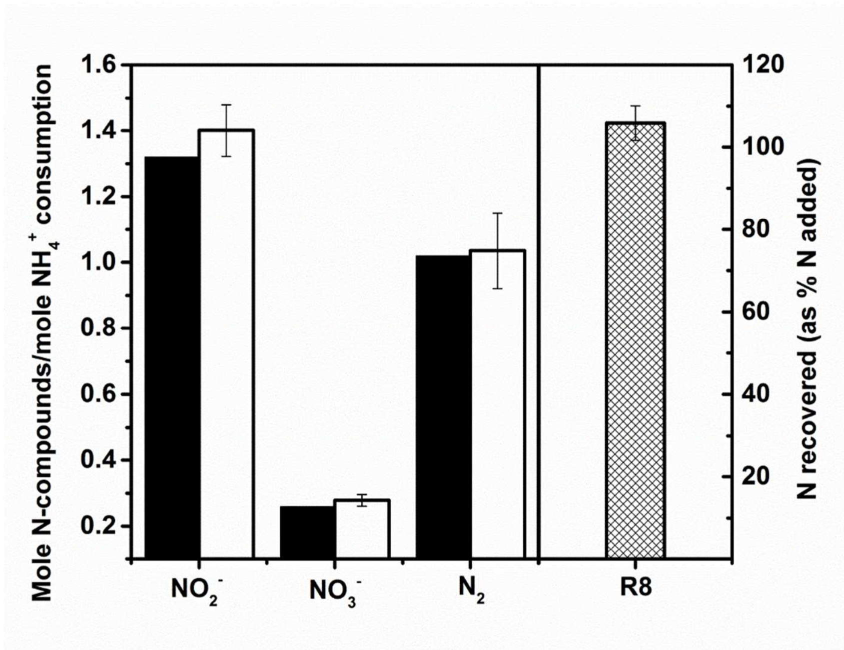

Figure S2. Reaction stoichiometry (empty bar) and N-balance (cross-hatched bar) calculated according to the data collected in period 4 in R8. Reported anammox stoichiometry (filled bar) is showed as comparison [1].

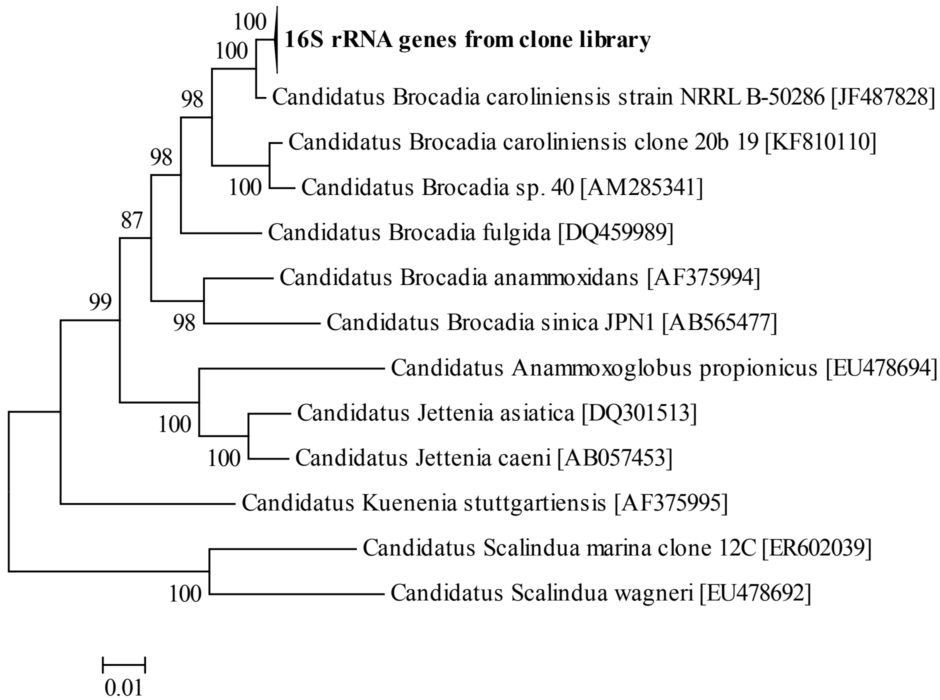

Figure S3. Phylogenetic analysis of anammox bacteria identified in the culture show that all analyzed sequences from the clone libraries were closely related to each other and to *Candidatus Brocadia caroliniensis* strain NRRL B-50286. A total of 18 clones were recovered and sequenced.

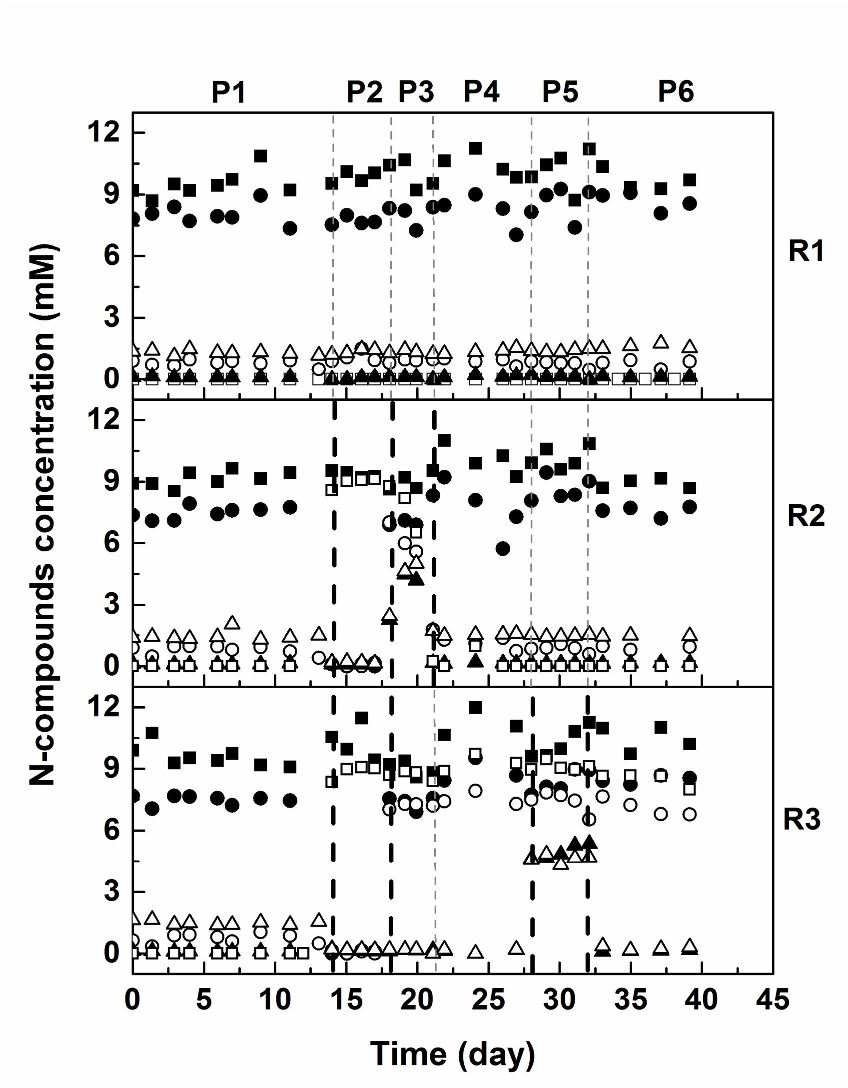

Figure S4. Concentration of NO_2^- (squares), NH_4^+ (circles), and NO_3^- (triangles) in the influent (close symbols) and effluent (open symbols) of the reactors R1, R2, and R3, during different operation periods (P1-P6).

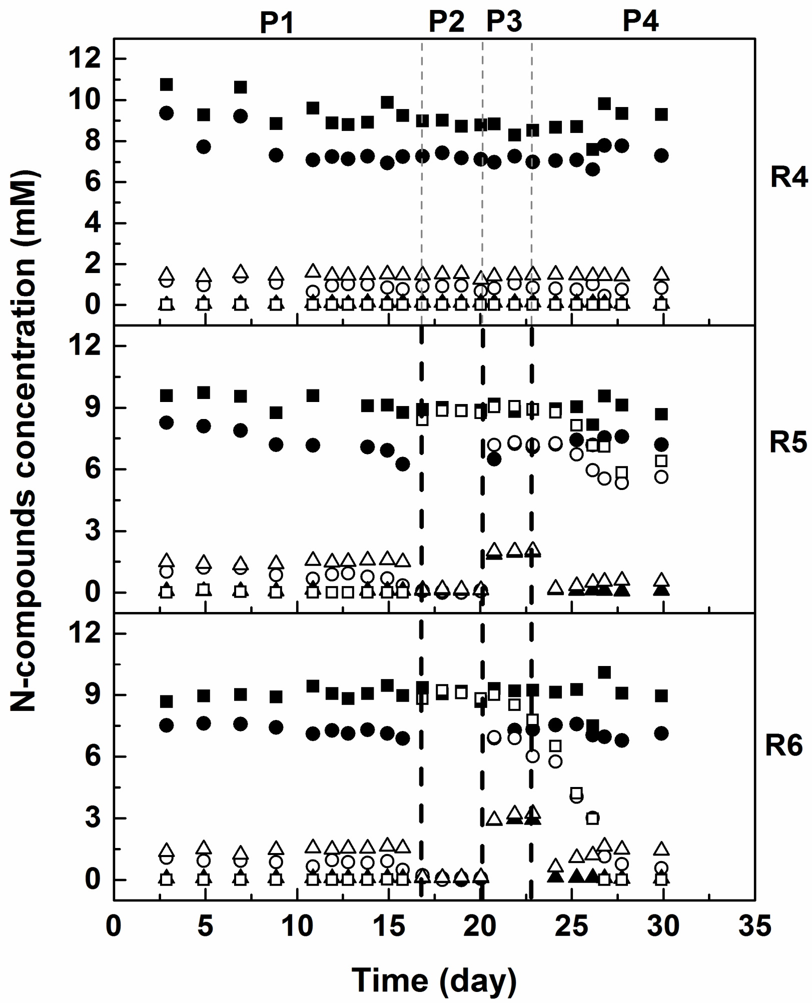

Figure S5. Concentration of NO_2^- (squares), NH_4^+ (circles), and NO_3^- (triangles) in the influent (close symbols) and effluent (open symbols) of the reactors R4, R5, and R6, during different operation periods (P1-P4).

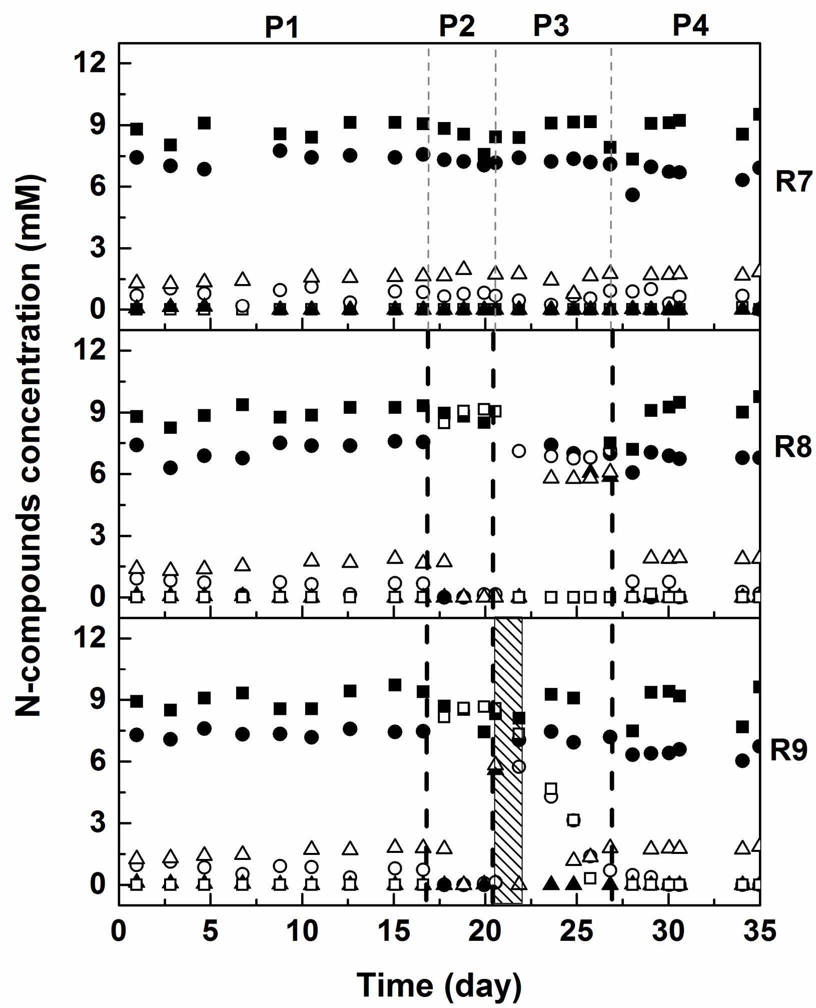

Figure S6. Concentration of NO_2^- (squares), NH_4^+ (circles), and NO_3^- (triangles) in the influent (close symbols) and effluent (open symbols) of the reactors R7, R8, and R9, during different operation periods (P1-P4). The shaded area indicates the duration of NO_3^- addition (1 day).

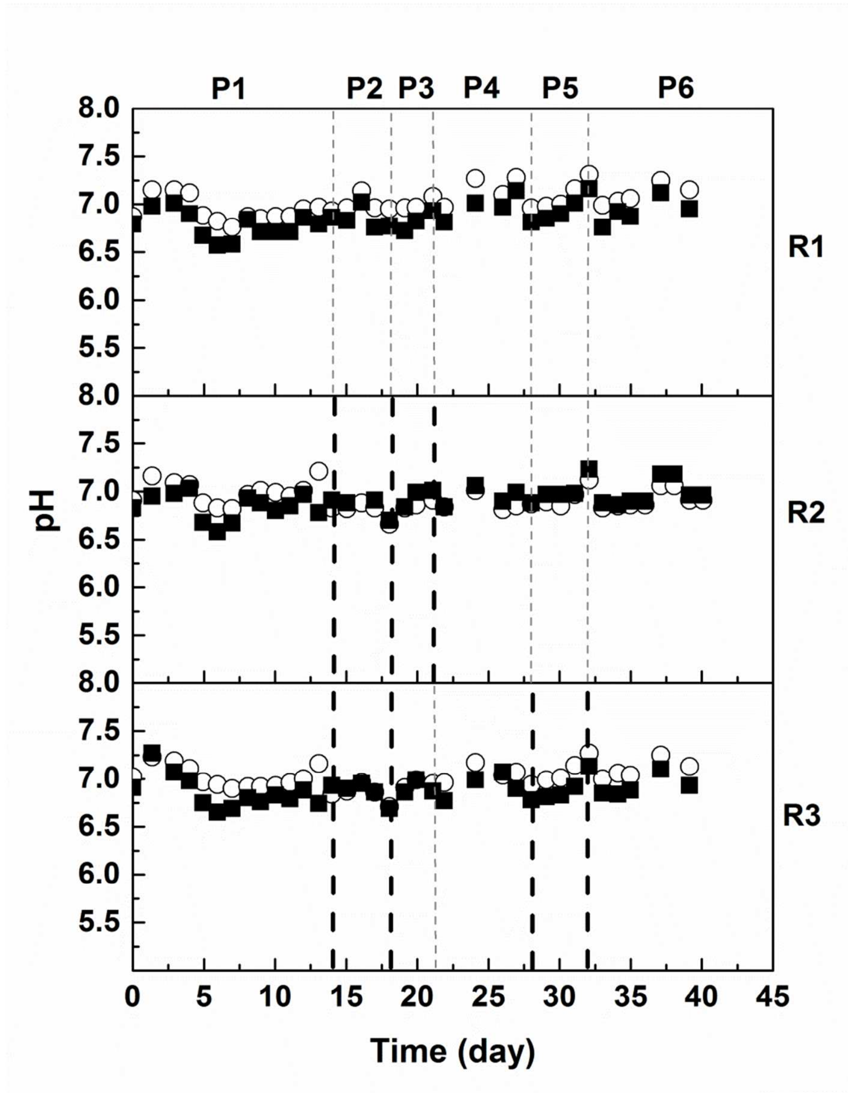

Figure S7. The pH of influent (close squares) and effluent (open circles) of the reactors R1, R2, and R3, during different operation periods (P1-P6).

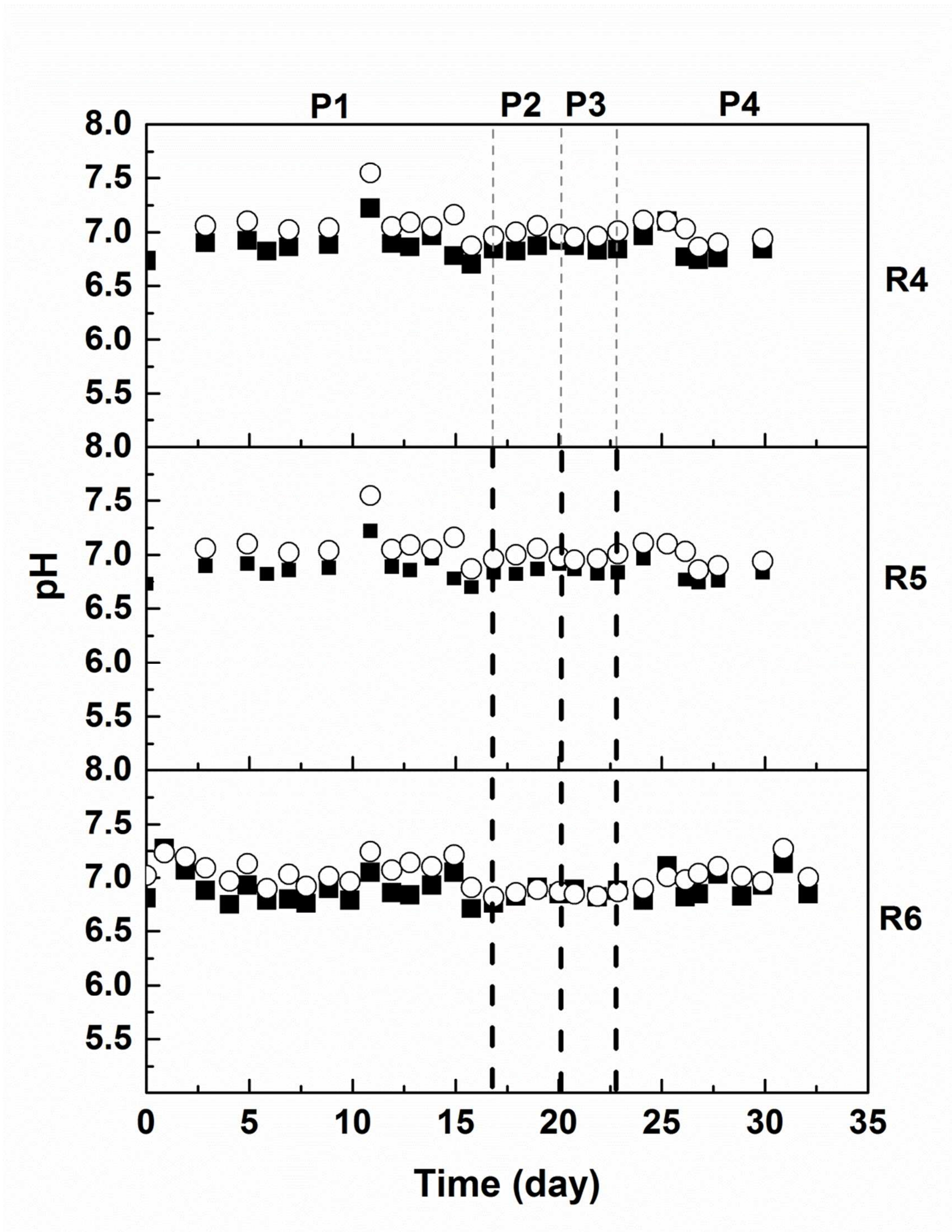

Figure S8. The pH of influent (close squares) and effluent (open circles) of the reactors R4, R5, and R6, during different operation periods (P1-P4).

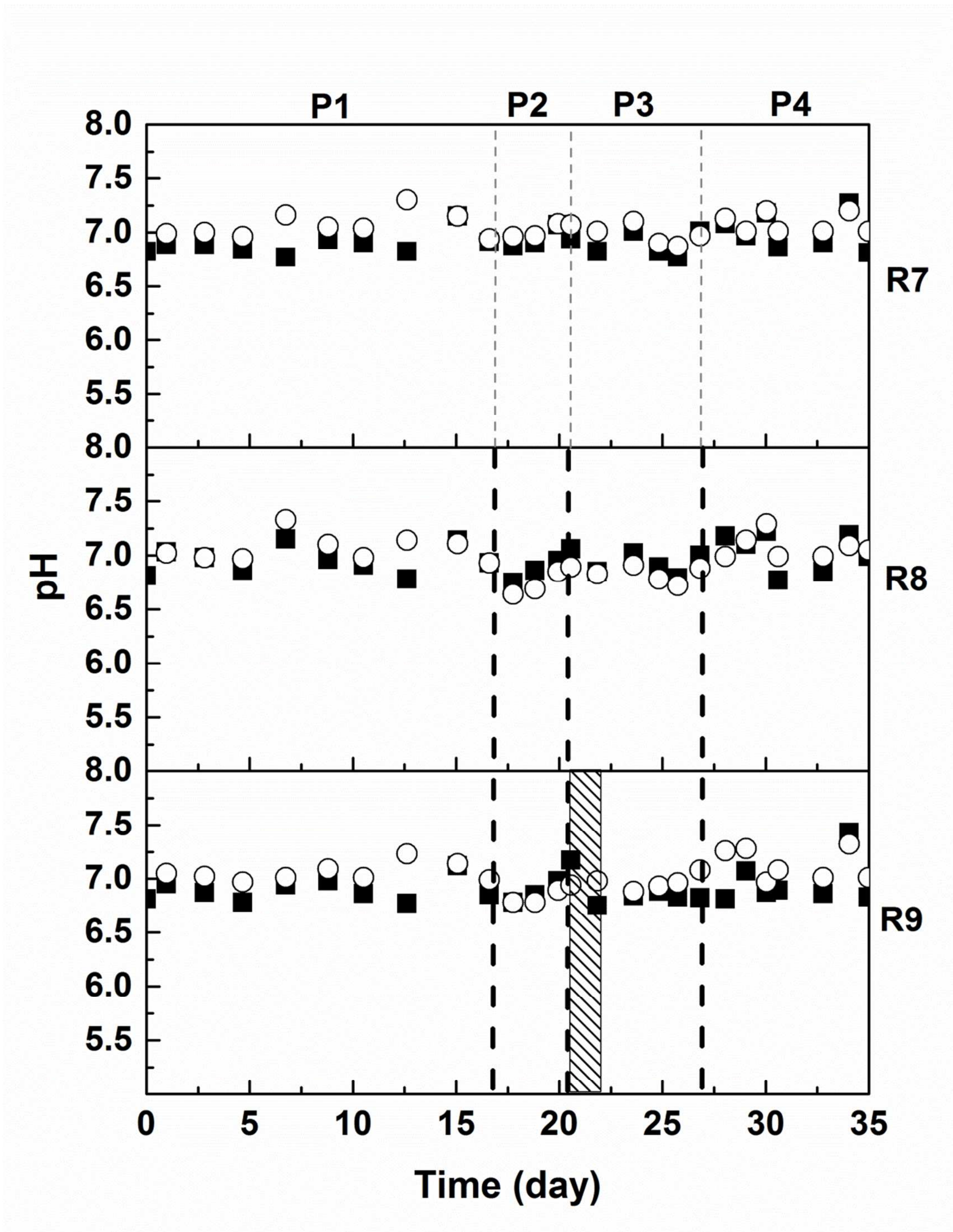

Figure S9. The pH of influent (close squares) and effluent (open circles) of the reactors R7, R8, and R9, during different operation periods (P1-P4). The shaded area indicates the duration of NO_3^- addition (1 day).

Reference

1. Strous, M.; Heijnen, J. J.; Kuenen, J. G.; Jetten, M. S. M., The sequencing batch reactor as a powerful tool for the study of slowly growing anaerobic ammonium-oxidizing microorganisms. *Appl. Microbiol. Biotechnol.* **1998,** *50*, 589-596.