

Supplementary Information

Effect of Fulvic Acids with Different Characteristics on Biological Denitrification

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Table S1. Distribution of different carbons in fulvic acids calculated from ^{13}C NMR spectra.^a

	Aliphatic C 0-90 ppm	Acetal C 90-110 ppm	Aromatic C 110-160 ppm	Carboxyl C 160-190 ppm	Carbonyl C 190-220 ppm
SAFA	53.7	12.3	19.9	9.7	4.8
SRFA	43.2	4.7	26.2	18.8	7.1
PPFA	28.2	3.1	35.1	27.6	6

^a The percentage peak areas of individual peaks were calculated by dividing their areas by the total spectral peak area of the sample.

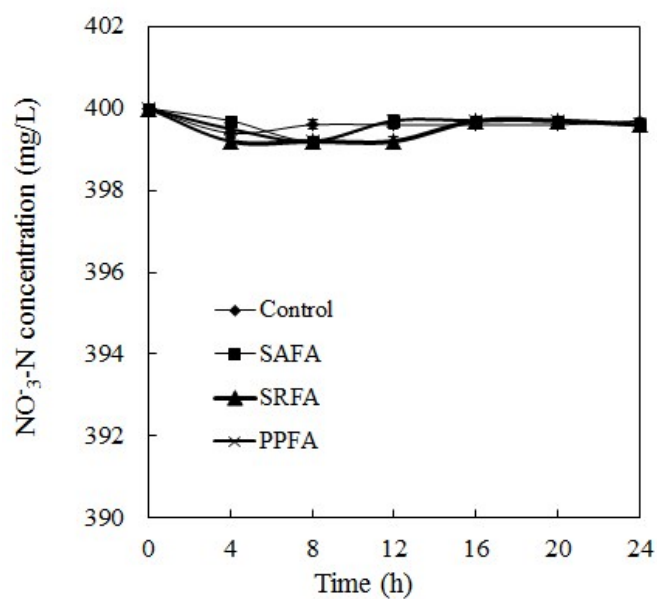


Fig. S1. The role of fulvic acids as carbon source during denitrification of *P. denitrificans*. Error bars represent standard deviations of triplicate tests. Error bars represent standard deviations of triplicate tests

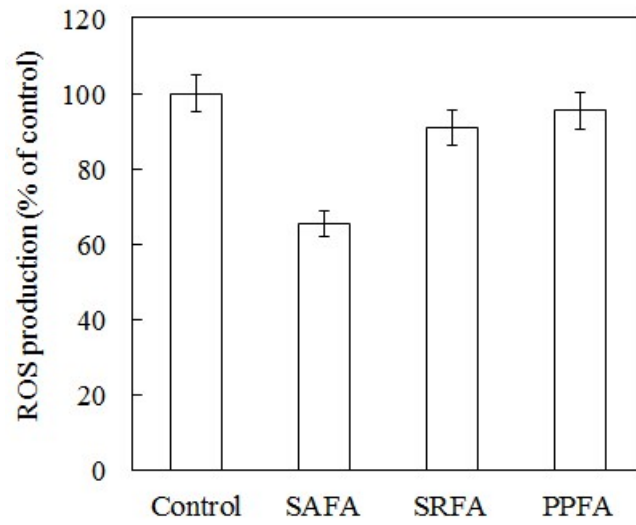


Fig. S2. Effects of fulvic acid (50 mg/L) on the intracellular ROS production during denitrification. Error bars represent standard deviations of triplicate tests.

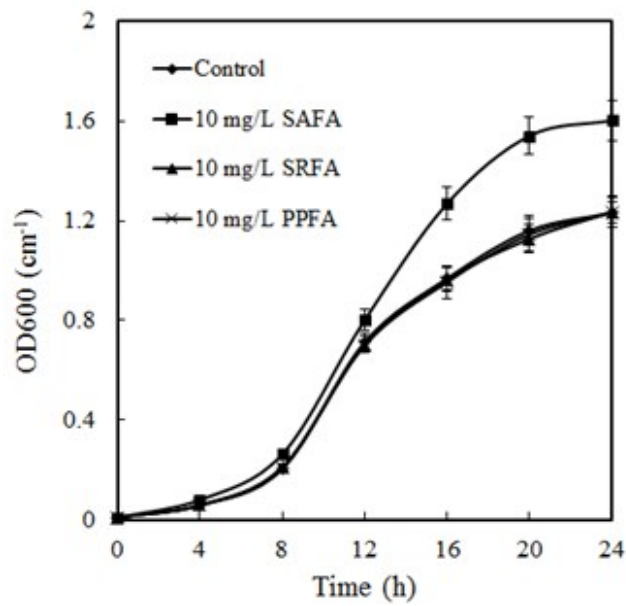


Fig. S3. Effects of fulvic acids on the growth curves of *P. denitrificans* at 10 mg/L. Error bars represent standard deviations of triplicate tests.

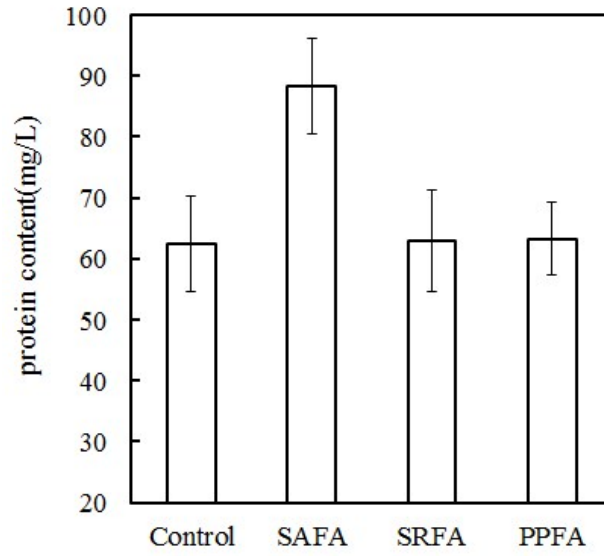


Fig. S4. Effects of fulvic acids on protein content of the cell culture (50 mg/L) at 24 h. Error bars represent standard deviations of triplicate tests.