

Supporting information

Antibiotic-resistant bacteria disinfection in untreated hospitals wastewater using peracetic acid with short contact time

Diego Francisco Sanchez^a, Lina Kisieline^a, Sabine Lindholst^b, Alexander Valentin Hansen^c, Jesper Sanderbo^c, Birgitte Krogh Løppenthien^c, Thomas Eilkær^c, Natascha Kock Pedersen^d, Jan Jørgensen^d, Caroline Kragelund^b, Henrik Rasmus Andersen^a, Ravi Kumar Chhetri^{*a}

^aDepartment of Environmental and Resource Engineering, Technical University of Denmark, Bygningstorvet, Building 115, 2800 Kgs. Lyngby, Denmark.

^bDepartment of Water and Biotechnology, Danish Technological Institute, Kongsvang Alle 29, DK-8000 Aarhus C, Denmark.

^cAlumichem (Norlex Systems A/S), Bistrupvej 172, 3460 Birkerød.

^dSK Forsyning, Nordvej 7, 4200 Slagelse.

*Corresponding author: rakc@env.dtu.dk

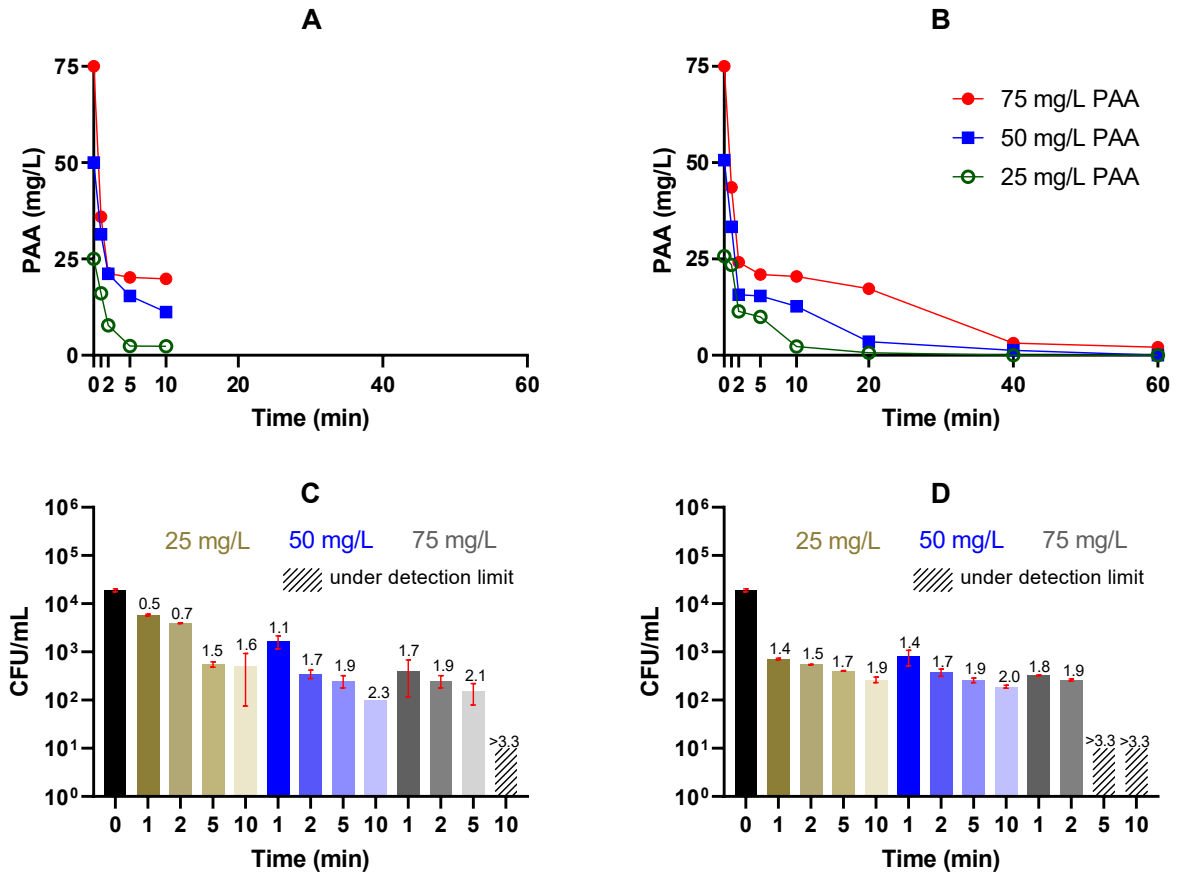


Figure S1: Concentration profiles of PAA in raw municipal wastewater from SK forsyning in the pilot-scale experiment (A), and from the batch experiment (B). The removal of ciprofloxacin-resistant bacteria in the raw municipal wastewater from SK forsyning after disinfection using different PAA concentrations in the pilot-scale experiment (C) and from the batch experiment (D). The logarithm removal of ciprofloxacin-resistant bacteria is indicated above each bar in the graph. The range of the duplicate analysis is indicated by T-bars.

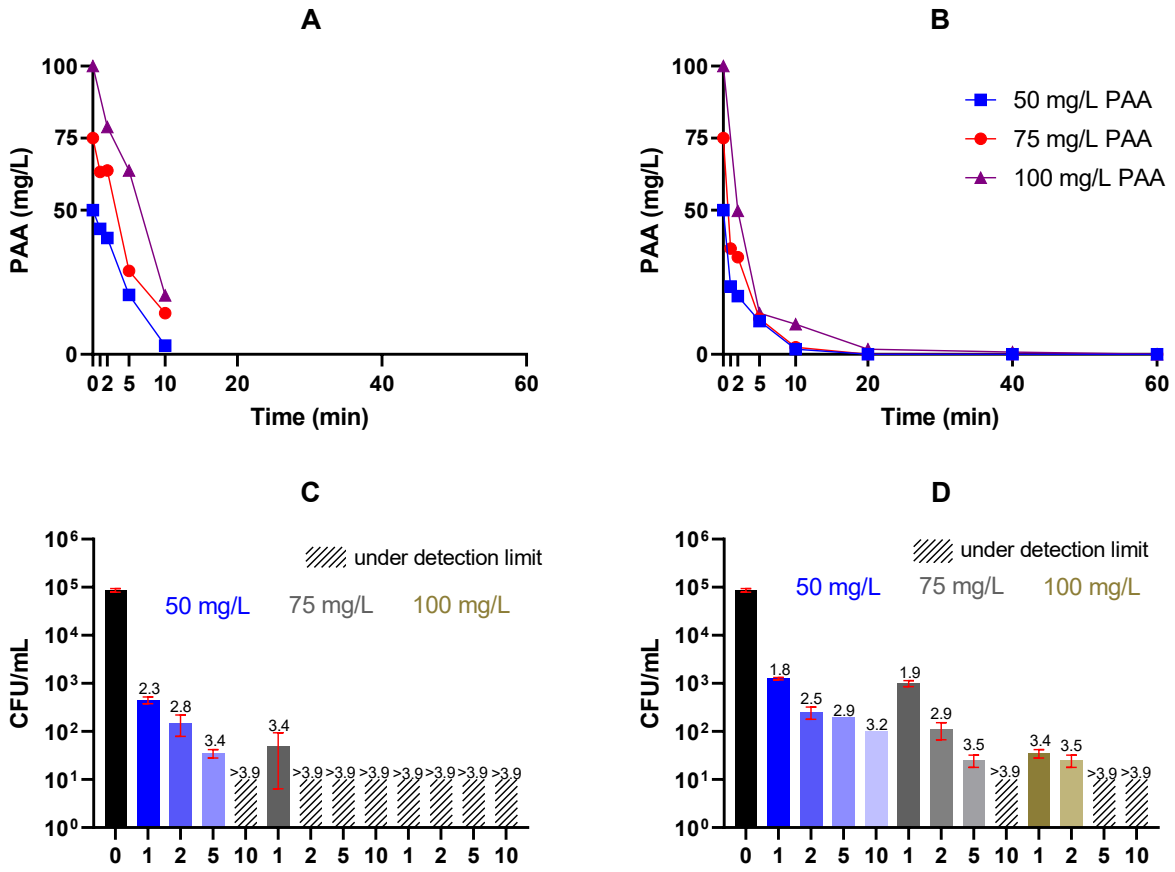


Figure S2: Concentration profiles of PAA in raw wastewater from Slagelse hospital in the pilot-scale experiment (A), and from the batch experiment (B). The removal of ciprofloxacin-resistant bacteria in the raw wastewater from Slagelse hospital after disinfection using different PAA concentrations in the pilot-scale experiment (C) and from the batch experiment (D). The logarithm removal of ciprofloxacin-resistant bacteria is indicated above each bar in the graph. The range of the duplicate analysis is indicated by T-bars.

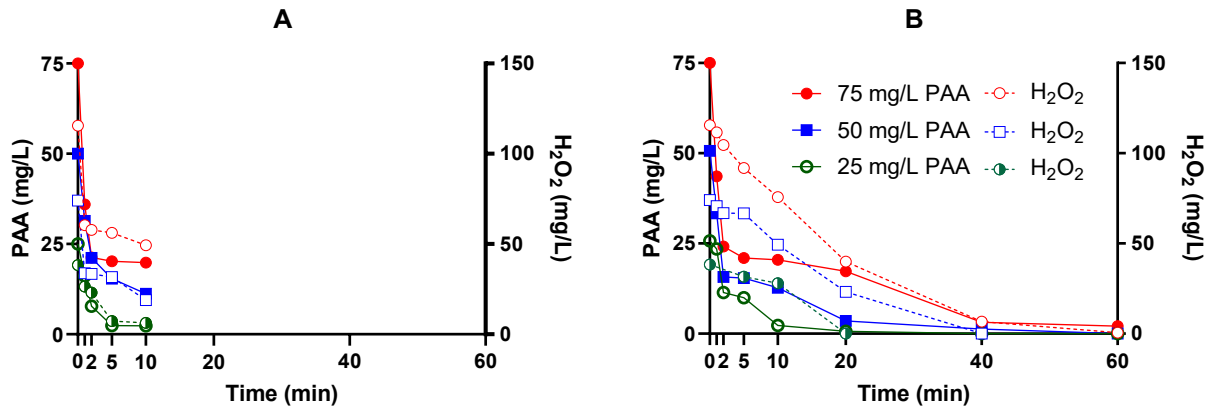


Figure S3: Concentration profile of PAA and hydrogen peroxide (H₂O₂) in the wastewater from SK forsyning in the second pilot experiment (A) and batch experiment (B).

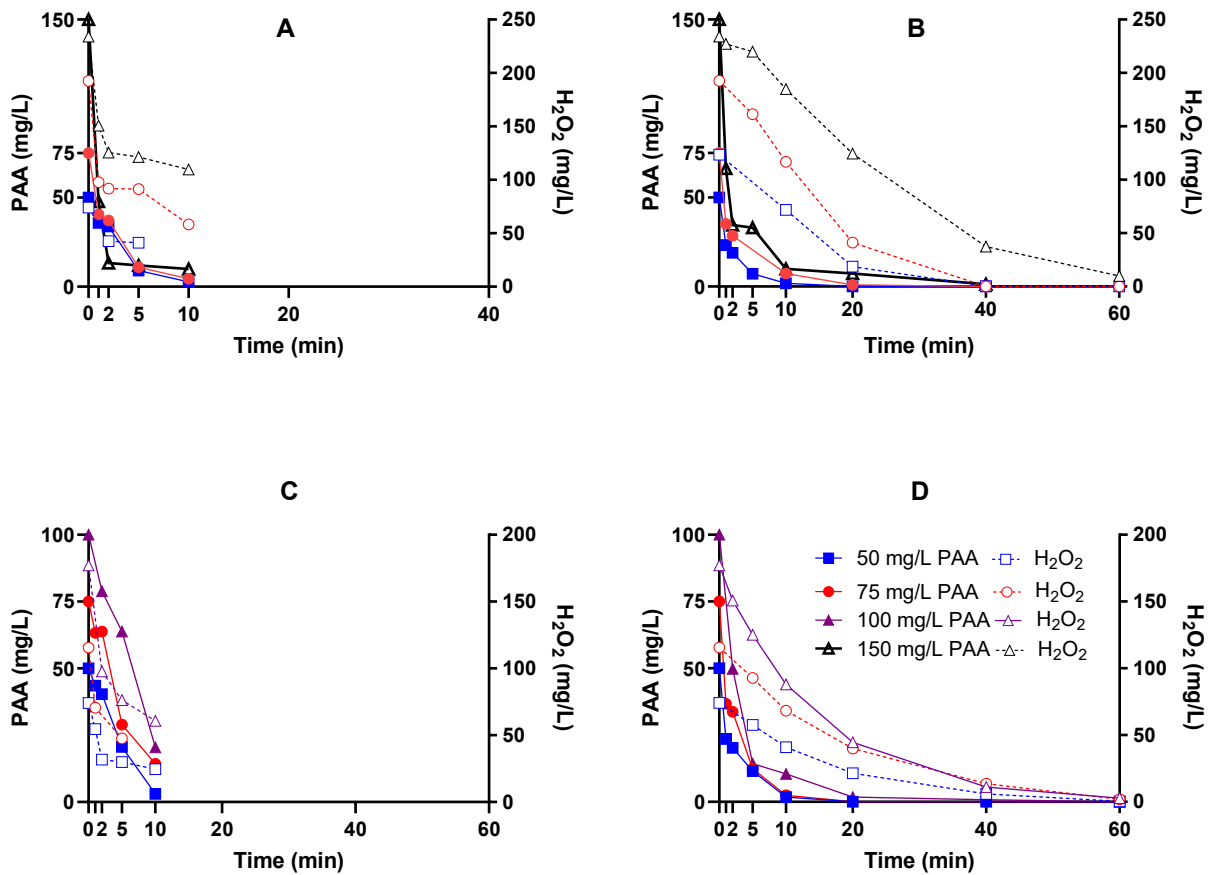


Figure S4: Concentration profile of PAA and H₂O₂ in the wastewater from Slagelse Hospital in the first and second pilot experiment (A and C) and batch experiments (B and D).