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Abstract

Constructed wetlands (CWs) have been applied to remove antibiotics under many conditions. However, the removal of antibiotics from saline wastewater in CWs is rarely studied, especially considering the constitution and configuration of CWs and influent water characteristics. In this current study, three experiments with two scales of CWs were conducted to investigate the influence of plant species, salinity levels and co-existing contaminants (nutrients and heavy metals) on the antibiotic sulfamethoxazole (SMX) removal. The four tested plant species did not show a significant influence on SMX removal in CW mesocosms when electrical conductivity (EC) was at 7 mS/cm, and the removal percentages of 73.1-74.8% and 70.1-76.3% for SMX were observed under low and high influent loads, respectively. High salinity level