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**Membrane fouling mitigation in a moving bed membrane bioreactor
combined with anoxic biofilter for treatment of saline wastewater
from mariculture**

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Abstract: Membrane fouling mitigation in a novel AF-MBMBR system (moving bed membrane bioreactor (10 L) coupled with anoxic biofilter (4 L)) under high salinity condition (35‰) was systematically investigated. Pre-positioned AF served as a pretreatment induced significant decrease of suspended biomass by 85 % and dissolved organic matters by 51.7 % in subsequent MBR, which resulted in a reduction of cake layer formation. Based on this, sponge bio-carriers in MBMBR further alleviated the fouling propensity by modifying extracellular polymeric substances (EPS) properties. The protein component in EPS decreased from 181.4 to

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