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ACCEPTED MANUSCRIPT

Optimum selection of extraction methods of extracellular

polymeric substances in activated sludge for effective

extraction of the target components

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Highlights

• EPS compositions are significantly affected by extraction methods.

• NaOH/HCHO had high efficiency with less cell lysis, and less efficiency for humics.

• NaOH/Heat can extract a variety of large EPS, causing a shift in the MW profile.

• CER can detect various organic fluorescents, but cannot extract large MW EPS.

• EPS extraction methods should be carefully chosen based on the target EPS components.

ABSTRACT

Effects of extraction methods of extracellular polymeric substances (EPS) from activated sludge

on extraction efficiency and extract composition were investigated. EPS extract was characterized

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