

The main goal of this study was to control the fouling phenomena in MBR using chemical additives. In the first phase of the study, SMP removal and bound EPS formation capacity of chemical additives were determined. Highest SMP removal (72%) was achieved by the Poly-2 additive. In the second phase of the study, short term filtration tests were conducted. Poly-1 exhibited highest performance based on membrane resistance, permeability and average TMP. According to the results obtained from constant shear rate tests in fourth phase, no significant change in viscosity with time was observed. Studies for the adaptation of rheograms to common flow models showed that chitosan and starch was not able to fit to Ostwald de Waele and Bingham models. At a shear rate of  $73.4 \text{ s}^{-1}$  viscosities of all samples were close to each other. Chitosan and starch achieved highest viscosity values at the shear rate of  $0.6 \text{ s}^{-1}$ .