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Abstract: The effect of using alum, polyaluminum silicate sulfate (PASS), and lime as coagulants on the performance of crossflow microfiltration of domestic wastewater was investigated. The primary membrane used throughout the study was made of woven polyester, while the dynamic membrane was formed by circulating MnO_2 precipitate. Slug doses of the coagulants were added to the circulation tank of the experimental setup at the beginning of each run. Doses of 20 to 120 mg/l of alum were investigated at pH of 7. The results showed an improvement in flux values with the increase in alum dose until an optimum dose beyond which no significant improvement was seen. Flux improvement was attributed to the agglomeration of particles which can be easily swept away by the shearing actions created by the crossflow velocity. Permeate quality was not found to be significantly affected by the increase in alum dose. PASS, which is an aluminum salt, was seen to behave in the same manner as alum when used as a coagulant. Lime was not found to be a suitable coagulant under these conditions.