

Study of flocculation with Prodefloc CRC 301 polyelectrolyte applied into a chemical wastewater treatment

Carmen ZAHARIA* and Mioara SURPĂȚEANU

Department of Environmental Engineering and Management, Technical University of Iasi, Faculty of Chemical Engineering, 71A D.Mangeron Bvd., 700050 Iasi, Romania

Abstract This paper discusses the application of synthetic PRODEFLOC CRC 301 cationic polyelectrolyte into a chemical industrial wastewater treatment (e.g., wastewaters from ceramics manufacturing). Synthetic wastewaters with a turbidity of 250 FTU were prepared and the flocculation process followed by sedimentation and/or filtration was studied. The cationic polyelectrolyte was used individually or together with a low dose of ferric sulfate as inorganic coagulant. Variables concerning the flocculant and coagulant doses are considered in order to appreciate the process efficiency (e.g., turbidity and color removals). The removal degrees of turbidity and color are important (> 90 %).

Keywords: cationic polyelectrolyte, ferric sulfate, flocculation, coagulation, wastewater, ceramics manufacturing
