ABSTRACT
In this study, pH adjustment, and chemical coagulation by polyaluminum chloride (PAC) and ferric chloride to remove suspended solid and COD in wet blue tannery wastewater were explored; and the settleability and dewatering characteristics of ferric and aluminiferous sludge were tested. The study can be concluded as follows: (1) without coagulation, the pH adjustment (below 3, or above 11) can remove SS and COD effectively, (2) removal for ferric chloride below 30mg/l rather than PAC below 30mg/l could remove SS and COD more effectively, (3) chemical coagulation with PAC and ferric chloride would be more efficient to remove SS and COD than with PAC alone, (4) sequential coagulation would be conducive to remove COD, (5) coagulation with PAC and ferric chloride would increase the settleability of flocs, and (6) the dewatering of ferric sludge would be better than that of aluminiferous sludge, so the addition of ferric chloride would improve the dewatering of Al sludge.

Keywords: Tannery wastewater, Chemical coagulation, Dual coagulation, Sludge dewatering, Ferric Chloride.