



FLOCCULANT OPTIMIZED BY CHARGE TITRATION WITH STABINO ZETA

CONTEXT

Recycling the water of a magenta pigment suspension was initiated with a 7 mL/L FeCl_3 solution. The flocculation immediately starts. However, it saturates and never reaches 100% where the pigment interface potential is expected to be zero (**Fig.1**).

To complete the flocculation by bringing the potential to zero, cationic polymer solution is added after a given dose of FeCl_3 . The cost of this process depends on the optimum switching moment from FeCl_3 to the polymer.

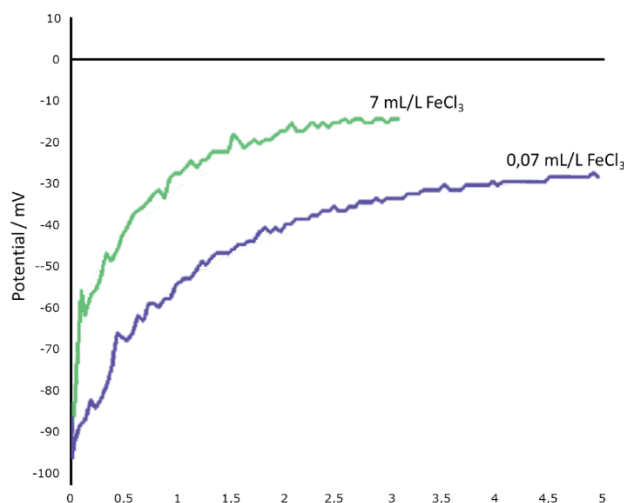


Figure 1

In **Fig. 2**, where the polymer titrations at different levels of pre-treatment are shown, "100%" corresponds to the 7mL/L FeCl_3 , which was used in the process. Due to the high conductivity of $> 50 \text{ mS/cm}$ at 100%, a high sensitivity piston was used for titration. The starting potential decreases