

Supplementary Information

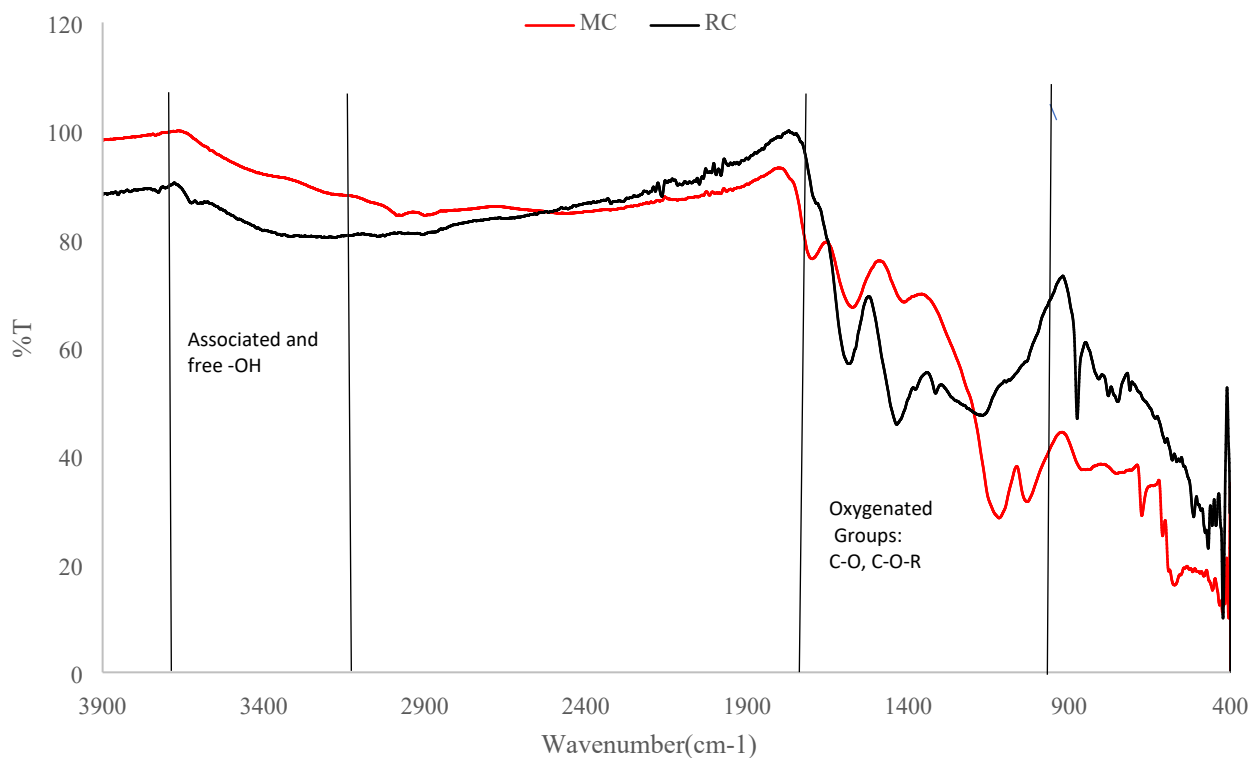


Figure 1: The FTIR spectra of raw and modified charcoal

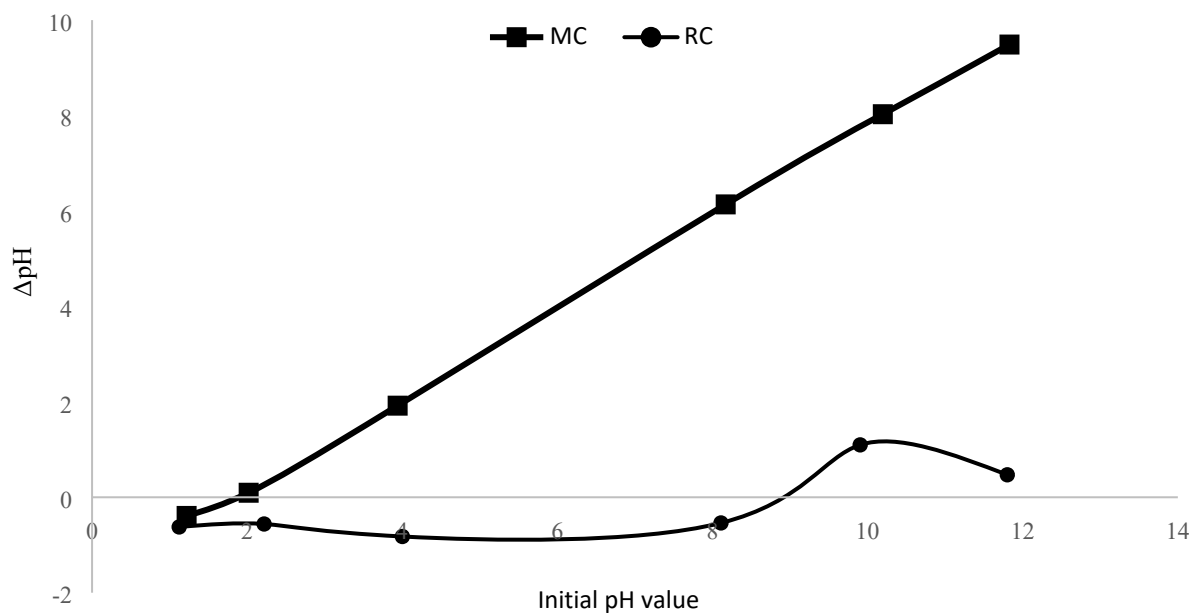


Figure 2: The results of the electrokinetic (pH_{PZC}) analysis of the raw and modified charcoal

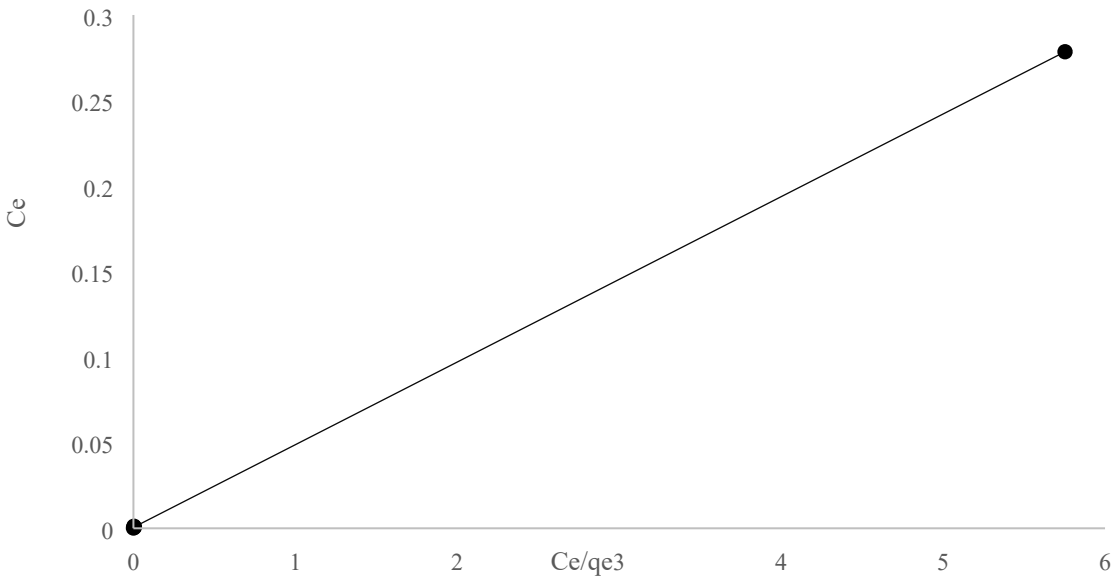


Figure 3a: Langmuir Equilibrium Isotherm Plot

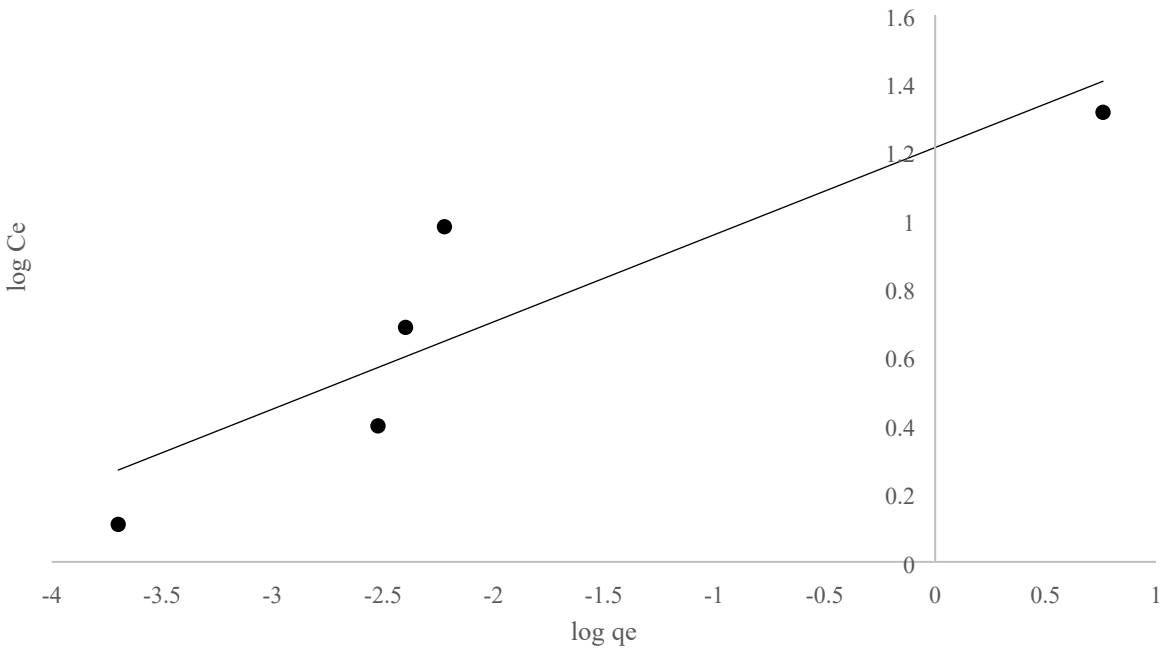


Figure 3b: Freundlich Equilibrium Isotherm Plot

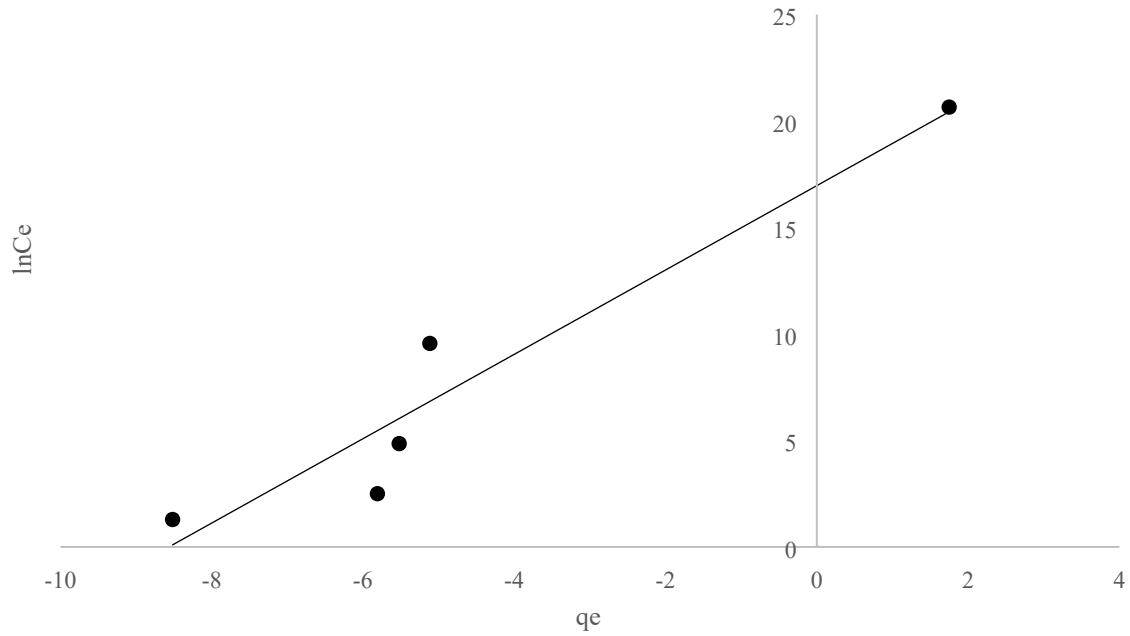


Figure 3c: Temkin Equilibrium Isotherm Plot

$$[F^-]_{TOT} = 2.63 \text{ M}$$

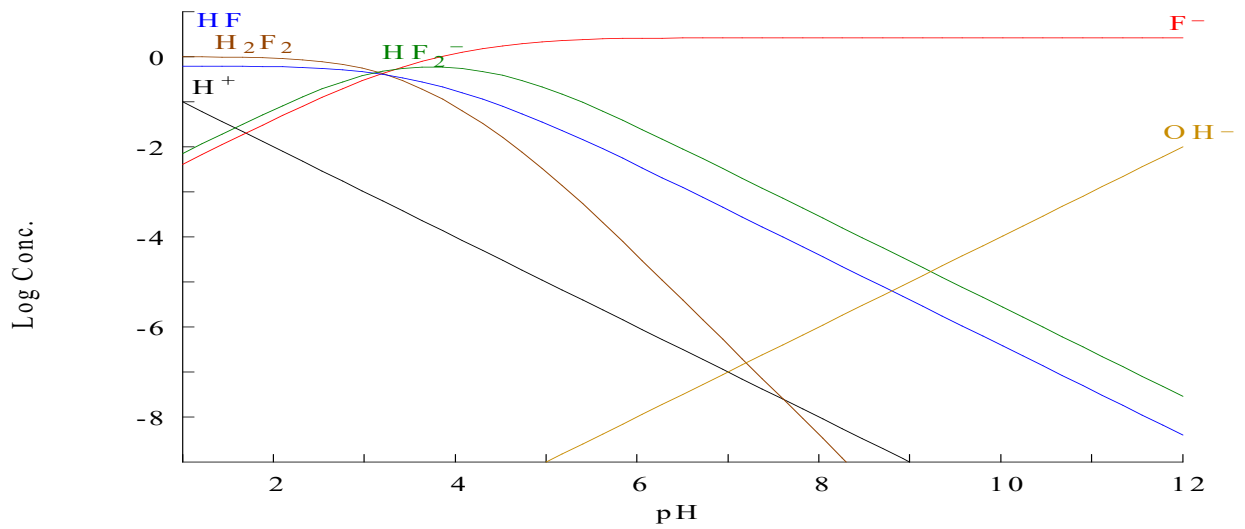


Figure 4: Hydrochemical equilibrium diagram of fluoride in the synthetic feedwater @50mg/L (i.e., 2.63M) fluoride solution