**Graphical Abstract**

[Fe(dipic)(NO3)(H2O)2]·2H2O (**1**) was prepared by the reaction of Fe(NO3)3 ⋅ 6H2O with dipicolinic acid in aqueous solution. In neutral complex [Fe(dipic)(NO3)(H2O)2, Fe(III) ion is seven-coordinated by a tridentate dipicolinate and a bidentate nitrate ions and the coordination is completed by two water molecules in axial positions in a distorted pentagonal-bipyramidal geometry. Cyclic voltammetric was studied and the apparent charge transfer rate constant, ks, and transfer coefficient, a, for electron transfer [Fe(dipic)(NO3)(H2O)2]·2H2O were calculated as 1/1± 0.10 s-1 and 0.49, respectively.



