

ABSTRACT

A simple and selective method was established for spectrophotometric determination of iron (II). Pyridine 2, 4, 6-tricarboxylic acid acts as an organic ligand molecule towards iron (II) to form an intense red-purple Fe-PTA complex with first order derivative value of 495.0 nm. Beer's law was obeyed for iron (II) concentrations from 3.0- 425.0 $\mu\text{g} \times 10 \text{ ml}^{-1}$. The molar absorptivity was found in the range of $0.186 \times 10^4 \text{ L mol}^{-1} \text{ cm}^{-1}$. The method has been successfully applied for the determination of iron (II) in Portland cement and pharmaceutical samples.

Key words: iron (II), pyridine 2, 4, 6-tricarboxylic acid, molar absorptivity, Portland cement and pharmaceutical samples.