ABSTRACT

Two procedures has been compared for the determination of total iron by converting it into the iron (II)-1,10-phenanthroline complex or iron (III) thiocyanate complex, which is then dissolved in acetone and water, and the absorbance is measured at wave length 511 nm for iron (II)-1,10-phenanthroline or 244 nm for iron (III) thiocyanate against a reagent blank. Beer's Law is obeyed over the concentration range 0,5 μg.mL⁻¹-5 μg.mL⁻¹ for iron (II)-1,10-phenanthroline and so 0,5 μg.mL⁻¹-5 μg.mL⁻¹ for iron (III) thiocyanate in the final solution. The percent recovery for iron (II)-1,10-phenanthroline is 99.03 % and for iron (III) thiocyanate is 99.15 %. The total iron in the wheat grains by iron (II)-1,10-phenanthroline complex's method is 0,3491 mgr/20 gr samples of wheat grains and iron (III) thiocyanate complex's method is 0,3496 mgr/20 gr samples of wheat grains.