



Determination of Calcium by new sequential injection unit using a chemical dye

KhdeejaJabbarAli and Fatima FahimAbd*

Chemistry Department, Education for Girls Faculty, Kufa University, Najaf, IRAQ

Abstract : This study includes the design sequential injection system for determining Calcium ion containing valve is designed locally and this Method is quick, highly accurate and cheap. The SIA system based on the reaction of Calcium with Eriochrome Black T at pH (9.5-11.5) with an absorption maximum at 542 nm. Various parameters (physical and chemical) affecting the determination have been investigated such as flow rate, reaction coil length, volume of reagent (Eriochrome Black T), volume of sample, concentration of Eriochrome Black T. The calibration curve was prepared and the dispersion coefficient, repeatability, interferences and application were studied. The linear range was (0.05-10 mg/L) at sampling rate of 125 sample per hour, the detection limit (0.0084 mg/L). Relative standard deviation for (10 mg/L), $n = 3$ were found (0.0545%). Dispersion coefficient was also measured for the method.

Keywords: Sequential Injection, Eriochrome Black T, Calcium.

Fatima FahimAbd *et al*/International Journal of ChemTech Research, 2016,9(11),pp 121-131.
