Microanalytical investigations for the determination of Certain Elements by Lon Chromatography and Nuclear Measurements

In this thesis is intended to analyse bottled ground water available in local market an surface water from different locations in Egypt. This includes physical characterization, identification and determination of inorganic species and measurement of the radioactivity levels of naturally occurring nuclides in the tested samples using fully automated ion chromatography and number of nuclear measurements. It is subdivided into three main chapters including :Chapter-1 : The introduction includes a historical review of chromatography, factors affecting chromatographic separations and a literature survey of the analysis of common cations and anions and previous studies for separation and determination of heavy metal ions by ion chromatography coupled with UV-Vis detection mode. This chapter, also includes the decay schemes of naturally occurring radionuclides and short notes focusing on the distribution behaviour of radium isotopes in both surface and ground water resources. Also, a literature review of published work on determination of natural occurring radionuclide is cited.