

Using ED(P)-XRF (Energy Dispersive X-Ray Fluorescence Spectrometry) analytical methodology, iodine is now routinely determined as part of a multi-element XRF analysis package on samples (soils and stream sediments) collected for regional geochemical baseline mapping in the United Kingdom. For the first time, a high density regional geochemical map of iodine in soils is presented. These new data for iodine greatly increase the worldwide database for iodine in soils and the regional map of iodine offers an opportunity to better understand the factors that control its distribution in the surface environment. Iodine is often cited as the classic example of how a trace element deficiency in the environment affects human health, in the case of iodine endemic diseases collectively referred to as iodine deficiency disorders. The proximity to the sea coast, providing a supply of iodine via the atmosphere, and the organic content of the soil are seen as the two most important factors in determining the iodine status of the soil.