

The concentrations of Br in potable groundwaters in the United Kingdom range from 60 to 340 mg l<sup>-1</sup>. The occurrence of Br is described in terms of the Br/Cl weight ratio which enables small changes in bromide concentrations to be assessed in terms of salinity. Median values of Br/Cl in groundwaters range from 2.60 to 5.15610<sub>y3</sub> compared with a sea water ratio of 3.47610<sub>y3</sub>. In recent shallow groundwaters the Br/Cl ratio is rather variable in response to a range of natural and anthropogenic inputs (marine and industrial aerosols, industrial and agricultural chemicals including road salt). Some slight enrichment in Br/Cl also occurs naturally during infiltration as a result of biogeochemical processes. Evolution of Br/Cl along groundwater flow lines reflects the sources of increasing salinity; either the influence of marine sedimentary formations or evaporites. The groundwaters in the Triassic sandstones of the English Midlands show significant Br depletion due to the evaporite source, in contrast to groundwaters in Cumbria. Br/Cl ratios in the Sherwood Sandstone of the East Midlands mainly reflect the natural input sources and can be used to help understand the palaeohydrology.