

## **Radium-226**

### **Water**

Radium is pre-concentrated by evaporation and the resulting residue is dissolved in a mineral acid.

Radium is separated from the resulting sample solution by a combination of anion-exchange and cation-exchange. Radium-224, sourced from a nationally traceable uranium-232 solution, is used as an internal standard. The determination is by alpha-spectrometry. A correction is made for sample-derived radium-224 via the thorium-228 analytical result, assuming secular equilibrium between the two radionuclides. This is a reasonable assumption for materials which have been in storage for more than one month.