

## Thorium isotopes ( $^{232}\text{Th}$ , $^{230}\text{Th}$ and $^{228}\text{Th}$ )

### Solids

Solids are dissolved using a mixture of mineral acids, including hydrofluoric acid. Thorium is isolated from the resulting solution by anion-exchange chromatography. The purified thorium is then electrodeposited onto a stainless-steel disc, which is then measured by alpha spectrometry. Thorium-229 is used as an internal standard for the procedure.

### Liquids

Thorium is pre-concentrated by evaporation or co-precipitation. The resulting solid material is dissolved in a mineral acid. Thorium is isolated from the resulting solution by anion-exchange chromatography. The purified thorium is then electrodeposited onto a stainless-steel disc, which is then measured by alpha spectrometry. Thorium-229 is used as an internal standard for the procedure.