HISTORY OF GUIDELINE DEVELOPMENT

Barium

The 1958 WHO *International Standards for Drinking-water* did not refer to barium. The 1963 International Standards recommended a maximum allowable concentration of 1.0 mg/l, based on health concerns. The 1971 International Standards stated that barium should be controlled in drinking-water, but that insufficient information was available to enable a tentative limit to be established. In the first edition of the *Guidelines for Drinking-water Quality*, published in 1984, it was concluded that it was not necessary to establish a guideline value for barium in drinking-water, as there was no firm evidence of any health effects associated with the normally low levels of barium in water. A health-based guideline value of 0.7 mg/l was derived for barium in the 1993 Guidelines, based on concern regarding the potential of barium to cause hypertension. The first addendum to the third edition, published in 2006, noted that the guideline value for barium may be highly conservative and that the margin of safety is likely to be high. This guideline value was brought forward to the fourth edition of the Guidelines, published in 2011. The first addendum to the fourth edition of the Guidelines, published in 2017, noted that there were limitations in the critical study used to establish the guideline value. The guideline value was therefore amended to 1.3 mg/L based on nephropathy in laboratory animals.