

HISTORIES OF GUIDELINE DEVELOPMENT FOR THE FOURTH EDITION

12. Chemical fact sheets

12.1 Chemical contaminants in drinking-water

Halogenated acetonitriles (dichloroacetonitrile, dibromoacetonitrile, bromochloroacetonitrile, trichloroacetonitrile)

History of guideline development

The 1958, 1963 and 1971 WHO *International Standards for Drinking-water* and the first edition of the *Guidelines for Drinking-water Quality*, published in 1984, did not refer to halogenated acetonitriles. The 1993 Guidelines established provisional health-based guideline values of 0.09 mg/l for dichloroacetonitrile, 0.1 mg/l for dibromoacetonitrile and 0.001 mg/l for trichloroacetonitrile. The guideline values were designated as provisional because of the limitations of the databases (i.e. lack of long-term toxicity and carcinogenicity bioassays). Available data were insufficient to serve as a basis for derivation of a guideline value for bromochloroacetonitrile. In the third edition of the Guidelines, published in 2004, a provisional guideline value of 0.02 mg/l was established for dichloroacetonitrile, with the provisional designation based on limitations of the toxicological database, and a guideline value of 0.07 mg/l was established for dibromoacetonitrile. Data were insufficient to serve as a basis for derivation of guideline values for either bromochloroacetonitrile or trichloroacetonitrile. This assessment was brought forward to the fourth edition of the Guidelines, published in 2011.