HISTORIES OF GUIDELINE DEVELOPMENT FOR THE FOURTH EDITION

12. Chemical fact sheets

12.1 Chemical contaminants in drinking-water

Iron

History of guideline development

The 1958 WHO *International Standards for Drinking-water* suggested that concentrations of iron greater than 1.0 mg/l would markedly impair the potability of the water. The 1963 and 1971 International Standards retained this value as a maximum allowable or permissible concentration. In the first edition of the *Guidelines for Drinking-water Quality*, published in 1984, a guideline value of 0.3 mg/l was established, as a compromise between iron's use in water treatment and aesthetic considerations. No health-based guideline value for iron in drinking-water was proposed in the 1993 Guidelines, but it was mentioned that a value of about 2 mg/l can be derived from the PMTDI established in 1983 by JECFA as a precaution against storage in the body of excessive iron. Iron stains laundry and plumbing fixtures at levels above 0.3 mg/l; there is usually no noticeable taste at iron concentrations below 0.3 mg/l, and concentrations of 1–3 mg/l can be acceptable for people drinking anaerobic well water. The third edition of the Guidelines, published in 2004, and the fourth edition of the Guidelines, published in 2011, also did not establish a guideline value for iron in drinking-water.