

HISTORIES OF GUIDELINE DEVELOPMENT FOR THE FOURTH EDITION

12. Chemical fact sheets

12.1 Chemical contaminants in drinking-water

Dichlorobenzenes (1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene)

History of guideline development

The 1958, 1963 and 1971 WHO *International Standards for Drinking-water* did not refer to DCBs. In the first edition of the *Guidelines for Drinking-water Quality*, published in 1984, no guideline value was recommended for 1,2- or 1,4-DCB after a detailed evaluation of the compounds. Toxicological limits for drinking-water of 0.005–0.05 mg/l were derived based on an ADI; given that the threshold odour concentrations are 0.003 mg/l for 1,2-DCB and 0.001 mg/l for 1,4-DCB, 10% of each of these values was recommended as a level unlikely to give rise to taste and odour problems in drinking-water supplies. The 1993 Guidelines calculated a health-based guideline value of 1 mg/l for 1,2-DCB, which far exceeds the lowest reported taste threshold of 1,2-DCB in water (0.001 mg/l). There were insufficient toxicological data on 1,3-DCB to permit a guideline value to be proposed, but the 1993 Guidelines noted that it is rarely found in drinking-water. A health-based guideline value of 0.3 mg/l was proposed for 1,4-DCB, which far exceeds the lowest reported odour threshold of 1,4-DCB in water (0.0003 mg/l). This assessment was brought forward to the third edition of the Guidelines, published in 2004, and the fourth edition of the Guidelines, published in 2011.