

HISTORIES OF GUIDELINE DEVELOPMENT FOR THE FOURTH EDITION

12. Chemical fact sheets

12.1 Chemical contaminants in drinking-water

Acrylamide

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 acrylamide. The 1993 Guidelines established a guideline value of 0.0005 mg/l associated with an upper-bound excess lifetime cancer risk of 10^{-5} , noting that although the practical quantification level for acrylamide is generally in the order of 0.001 mg/l, concentrations in drinking-water can be controlled by product and dose specification. The fourth edition of the Guidelines, published in 2011, retained this guideline value but noted concerns regarding the carcinogenicity and neurotoxicity of acrylamide and concluded that the acrylamide content of polyacrylamide used as a coagulant aid in water treatment, the most important source of drinking-water contamination by acrylamide, should be as low as possible and that polyacrylamide should not be overdosed in an attempt to take a shortcut to improving coagulation.