

## HISTORY OF GUIDELINE DEVELOPMENT

### Organotins

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 organotins. For the 1993 Guidelines, dialkyltins were assessed and it was concluded that the data available were insufficient propose guideline values for individual dialkyltins. 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.

In 2020, in a background document to the Guidelines, an expanded group of organotins was assessed and formal guideline values were not derived. However, a health-based value of 0.0015 mg/L was established for tributyltin, dibutyltin, triphenyltin, and dioctyltin (to be applied to the sum of the detections of the individual compounds), to provide guidance when there is a local concern. The health-based value was based on data from chronic immunotoxicity studies in rats exposed to tributyltin oxide and considering that these organotin compounds have a similar mode of action and potency in terms of immunotoxicity. A formal guideline value was not established for these compounds because exposure through drinking-water is likely to be well below levels of health concern. For monomethyltin, dimethyltin and dimethyltin dichloride, guideline values were not established because these compounds are normally found in drinking-water as a result of their use as stabilizers in polyvinyl chloride and chlorinated polyvinyl chloride piping and therefore, their use should be controlled by product specification. Guideline or health-based values for other organotin compounds were not established due to lack of sufficient toxicity data. This assessment, including the health-based value for tributyltin, dibutyltin, triphenyltin, and dioctyltin, was incorporated in the fourth edition of the Guidelines incorporating the first and second addenda, published in March 2022.