

Guidelines for Drinking-water Quality

FIRST ADDENDUM TO THE
FOURTH EDITION



World Health
Organization

Guidelines for Drinking-water Quality

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FOURTH EDITION

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Preface

Access to safe drinking-water is essential to health, a basic human right and a component of effective policy for health protection.

The primary goal of the *Guidelines for drinking-water* quality is to protect public health associated with drinking-water quality. The overall objectives of the Guidelines are to:

- provide an authoritative basis for the effective consideration of public health in setting national or regional drinking-water policies and actions;
- provide a comprehensive preventive risk management framework for health protection from catchment to consumer, covering policy formulation and standard setting, risk-based management approaches and surveillance;
- emphasize achievable practices and the formulation of sound regulations, applicable to low-income, middle-income and industrialized countries alike;
- summarize the health implications associated with contaminants in drinking-water, and the role of risk assessment and risk management in disease prevention and control;
- summarize effective options for drinking-water management; and
- provide guidance on hazard identification and risk assessment.

The objectives of the first addendum are to ensure that the fourth edition of the Guidelines is updated to reflect new evidence and to provide additional explanations to support better understanding of the document. In particular, efforts were made to:

- update or develop chemical threshold values (guideline and health-based values) where new evidence has emerged through high-quality reviews of the literature; for example, through evaluations from the Joint Food and Agriculture Organization of the United Nations (FAO)/WHO Meeting on Pesticide Residue (JMPR) and the Joint FAO/WHO Expert Committee on Food Additives (JECFA);

- respond to requests from Member States for specific guidance (e.g. guidance on pesticides in drinking-water); and
- clarify known misunderstandings about some concepts and terminology included in the fourth edition.

The key changes in the first addendum include:

- new risk assessments and guideline values or health-based values for dichlorvos, dicofol, and perchlorate;
- revised risk assessments and guideline values or health-based values for barium, bentazone, diquat, and MCPA;
- revised risk assessments for chlorine dioxide, chlorate and chlorite, and nitrate and nitrite;
- additional guidance on risk management considerations and monitoring of lead;
- additional guidance on microbial risk assessment, aggregating multiple barriers for overall water treatment performance and microbial detection methods; and
- inclusion of references to supporting documents published after the fourth edition of the Guidelines.

The Guidelines are addressed primarily to water and health regulators, policy-makers and their advisors, to assist in the development of national policies and regulations. Together with associated documents, the Guidelines are also used by many others as a source of information on water quality and health, and on effective management approaches.

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