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Water quality — Determination of permanganate index

Qualité de l'eau — Détermination de l'indice de permanganate



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 8467 was prepared by Technical Committee ISO/TC 147, *Water quality*, Sub-Committee SC 2, *Physical, chemical, biochemical methods*.

This second edition cancels and replaces the first edition (ISO 8467:1986), of which it constitutes a technical revision.

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Introduction

The permanganate index is a conventional measure of the contamination by organic and oxidizable inorganic matter in a water sample. It is primarily intended for judging the quality of potable water and raw waters, such as well and surface waters. More heavily contaminated waters may be analysed, provided an appropriate pre-dilution step is adopted. The permanganate index can be determined for waters containing less than 500 mg/l of chloride ion. Reducing compounds such as iron(II) salts, nitrites or hydrogen sulfide may contribute to the permanganate index but are not classified as impurities.

The permanganate index cannot be considered as a measure of the theoretical oxygen demand or the total content of organic matter. Many organic compounds are only partially oxidized in this test, as oxidation is generally incomplete. Volatile matter that evaporates before the addition of permanganate is not included.

The method is not recommended for determining organic load in waste waters; for this purpose the chemical oxygen demand should be determined as described in ISO 6060:1989, *Water quality — Determination of the chemical oxygen demand*.

The method is simple and convenient for surveying the quality of a large number of water samples.