

# INTERNATIONAL STANDARD

**ISO**  
**6060**

Second edition  
1989-10-15

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## **Water quality — Determination of the chemical oxygen demand**

*Qualité de l'eau — Détermination de la demande chimique en oxygène*



Reference number  
ISO 6060:1989(E)

## 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 approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 6060 was prepared by Technical Committee ISO/TC 147, *Water quality*.

This second edition cancels and replaces the first edition (ISO 6060:1986). Technically the second edition is equivalent to the first edition, but the maximum permissible chloride content of the test portion is now restricted to 1 000 mg/l (first edition 2 000 mg/l).

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International Organization for Standardization  
Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

## Introduction

The chemical oxygen demand, COD, of water as determined by this dichromate method can be considered as an approximate measure of the theoretical oxygen demand, i.e. the amount of oxygen consumed in total chemical oxidation of the organic constituents to inorganic end products (see also clause 10). The degree to which the test results approach the theoretical value depends primarily on how complete the oxidation is. A great number of organic compounds are oxidized to an extent of between 90 % and 100 %, and for waters where these compounds predominate, such as municipal effluents, the COD value is a realistic measure of the theoretical oxygen demand. For other waters which contain large quantities of certain substances that are difficult to oxidize under the conditions of the test (see clause 10), the COD value is a poor measure of the theoretical oxygen demand. This may be the case for some industrial effluents.

The significance of a COD value thus depends on the composition of the water studied. This should be borne in mind when judging results obtained by the method specified in this International Standard.