



**International  
Standard**

**ISO 15192**

**Soil and waste — Determination  
of chromium(VI) in solid  
material by alkaline digestion  
and ion chromatography with  
spectrophotometric detection**

*Déchets et sols — Dosage du chrome(VI) dans les matériaux  
solides par digestion alcaline et chromatographie ionique avec  
détection spectrophotométrique*

**Third edition  
2025-09**

ISO 15192:2025

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## Foreword

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This document was prepared by Technical Committee ISO/TC 190, *Soil quality*, Subcommittee SC 3, *Chemical and physical characterization*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 444, *Environmental characterization of solid matrices*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 15192:2021), which has been technically revised.

The main changes are as follows:

- integration of the determination of the total chromium in the alkaline digestion solution;
- addition of barium chromate as an alternative to lead chromate for the verification of the method in [10.5.3](#);
- the text has been editorially revised, including updating of references.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

Under environmental conditions chromium in compounds exists in the trivalent, Cr(III), or the hexavalent, Cr(VI) state. Chromium is an essential trace element for mammals, including man, whereas it is presumed that Cr(VI) compounds are genotoxic and carcinogenic in humans. Interconversion of trivalent and hexavalent chromium species can occur during sample preparation and analysis, but these processes are minimised, to the extent possible, by the sample preparation methods prescribed by this document.

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