

ISO/TC 190/SC 3

Date: 2025-04-07

**ISO/FDIS 15192:2025(E)**

ISO/TC 190/SC 3

Secretariat: DIN

Date: 2025-06-02

## 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 spectrométrique~~

(<https://standards.iteh.ai>)  
Document Preview

ISO/FDIS 15192

<https://standards.iteh.ai/catalog/standards/iso/1823cf86-d5ef-45d5-8fc6-2a85939378a0/iso-fdis-15192>

~~COPYRIGHT PROTECTED DOCUMENT~~

# FDIS stage

iTeh Standards  
(<https://standards.iteh.ai>)  
Document Preview

ISO/FDIS 15192

<https://standards.iteh.ai/catalog/standards/iso/1823cf86-d5ef-45d5-8fc6-2a85939378a0/iso-fdis-15192>

Edited DIS - MUST BE USED FOR FINAL DRAFT

© ISO 2025

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office

~~CP 401~~ • Ch. de Blandonnet 8 • ~~CP 401~~

CH-1214 Vernier, Geneva, ~~Switzerland~~

~~Tel.~~Phone: + 41 22 749 01 11

~~Fax~~ + 41 22 749 09 47

~~E-mail~~: copyright@iso.org

~~Website~~: [www.iso.org](http://www.iso.org)

Published in Switzerland

# iTeh Standards (<https://standards.iteh.ai>) Document Preview

ISO/FDIS 15192

<https://standards.iteh.ai/catalog/standards/iso/1823cf86-d5ef-45d5-8fc6-2a85939378a0/iso-fdis-15192>

© ISO 2025 – All rights reserved

iii

~~© ISO 2025 – All rights reserved~~

iii

Edited DIS - MUST BE USED FOR FINAL DRAFT

## Contents

Foreword.....	v
Introduction.....	vi
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions .....	1
4 Safety remarks .....	2
5 Principle .....	2
5.1 Digestion .....	2
5.2 Determination.....	2
5.3 Interferences and sources of error.....	3
6 Apparatus .....	3
7 Reagents .....	4
8 Sample pretreatment .....	6
9 Alkaline digestion procedure .....	7
9.1 General.....	7
9.2 Preparation of test solutions using a hotplate or heating block.....	7
10 Analytical procedure .....	7
10.1 General information .....	7
10.2 Instrumental set-up .....	7
10.3 Calibration.....	8
10.4 Test solution measurement .....	8
10.5 Quality control .....	8
11 Calculation.....	10
12 Expression of results .....	11
13 Test report.....	11
Annex A (informative) Ion chromatographic system.....	12
Annex B (informative) Requirements for test portion preparation.....	15
Annex C (informative) Validation .....	16
Annex D (informative) Background on methods for the determination of Cr(VI) in solid samples.....	21
Bibliography .....	26

## 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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at [www.iso.org/patents](http://www.iso.org/patents). ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

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).