



**International
Standard**

ISO 7431-1

**Thiourea for industrial use —
Part 1:
Test methods**

**First edition
2024-01**

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

[ISO 7431-1:2024](https://standards.iteh.ai/catalog/standards/iso/1b3789dd-2887-477b-b2f2-68cff2092341/iso-7431-1-2024)

<https://standards.iteh.ai/catalog/standards/iso/1b3789dd-2887-477b-b2f2-68cff2092341/iso-7431-1-2024>

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

ISO 7431-1:2024

<https://standards.iteh.ai/catalog/standards/iso/1b3789dd-2887-477b-b2f2-68cff2092341/iso-7431-1-2024>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2024

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
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Test methods	2
4.1 General	2
4.2 Determination of thiourea content	2
4.2.1 Principle	2
4.2.2 Reagents	2
4.2.3 Apparatus	2
4.2.4 Procedure	3
4.2.5 Calculation	3
4.2.6 Expression of results	3
4.3 Determination of water insoluble substance	3
4.3.1 Principle	3
4.3.2 Apparatus	3
4.3.3 Procedure	4
4.3.4 Calculation	4
4.3.5 Expression of results	4
4.4 Determination of ignition residue	4
4.4.1 Principle	4
4.4.2 Apparatus	4
4.4.3 Procedure	4
4.4.4 Calculation	4
4.4.5 Expression of results	5
4.5 Determination of initial melting point	5
4.5.1 Principle	5
4.5.2 Apparatus	5
4.5.3 Procedure	5
4.5.4 Calculation	5
4.5.5 Expression of results	5
4.6 Determination of turbidity	5
4.7 Determination of thiocyanate content	5
4.7.1 Principle	5
4.7.2 Reagents	6
4.7.3 Apparatus	6
4.7.4 Procedure	6
4.7.5 Calculation	6
4.7.6 Expression of results	6
4.8 Determination of calcium element	6
4.8.1 General	6
4.8.2 Ion chromatography	6
4.8.3 Inductively coupled plasma optical emission spectrometry (ICP-OES)	7
4.8.4 Atomic absorption spectrometry (AAS) (referee method)	8
4.9 Determination of heavy metals	9
4.9.1 Principle	9
4.9.2 Reagents	9
4.9.3 Apparatus	9
4.9.4 Procedure	9
4.9.5 Determination	9
4.9.6 Expression of results	9

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).

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. 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.

This document was prepared by Technical Committee ISO/TC 47, *Chemistry*.

A list of all parts in the ISO 7431 series can be found on the ISO website.

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.

ISO 7431-1:2024

<https://standards.iteh.ai/catalog/standards/iso/1b3789dd-2887-477b-b2f2-68cff2092341/iso-7431-1-2024>

Introduction

Thiourea (CAS¹⁾ No. 62-56-6), as a kind of chemical raw material, is widely used in the manufacture of drugs, dyes, resins, compression plastic powder, etc., and can also be used as vulcanization accelerator for rubber and flotation agent for metal minerals, especially in the field of high-folding optical resin materials.

Thiourea molecular weight: 76,12 (according to international relative atomic mass of 2019)

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

[ISO 7431-1:2024](https://standards.itih.ai/catalog/standards/iso/1b3789dd-2887-477b-b2f2-68cff2092341/iso-7431-1-2024)

<https://standards.itih.ai/catalog/standards/iso/1b3789dd-2887-477b-b2f2-68cff2092341/iso-7431-1-2024>

1) Chemical Abstracts Service (CAS) Registry Number® is a trademark of the American Chemical Society (ACS). This information is given for the convenience of users of this document and does not constitute an endorsement by ISO of the product named. Equivalent products may be used if they can be shown to lead to the same results.

