

---

---

**General methods of test for pigments  
and extenders —**

Part 2:  
**Determination of matter volatile at  
105 °C**

*Méthodes générales d'essai des pigments et matières de charge —  
Partie 2: Détermination de la teneur en matière volatile à 105 °C*

STANDARDSISO.COM : Click to view the full PDF of ISO 787-2:2021



STANDARDSISO.COM : Click to view the full PDF of ISO 787-2:2021



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2021

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](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland

# Contents

	Page
Foreword .....	iv
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Apparatus</b> .....	<b>1</b>
<b>5 Sampling</b> .....	<b>1</b>
<b>6 Procedure</b> .....	<b>2</b>
6.1 Number of determinations .....	2
6.2 Test portion .....	2
6.3 Determination .....	2
<b>7 Expression of results</b> .....	<b>2</b>
<b>8 Test report</b> .....	<b>2</b>

STANDARDSISO.COM : Click to view the full PDF of ISO 787-2:2021

## 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)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

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 [for Project Committee] ISO/TC 256, *Pigments, dyestuffs and extenders*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 298, *Pigments and extenders*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 787-2:1981), which has been technically revised. The main changes compared to the previous edition are as follows:

- the normative references have been updated, and ISO 18451-1 has been added;
- [Clause 3](#), Terms and definitions, has been added;
- the formula for calculating the test result has been modified;
- the text has been editorially revised.

A list of all parts in the ISO 787 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](http://www.iso.org/members.html).

# General methods of test for pigments and extenders —

## Part 2:

# Determination of matter volatile at 105 °C

## 1 Scope

This document specifies a general method of test for determining the mass fraction in percent of matter volatile at a temperature of 105 °C in a sample of pigment or extender.

This method is applicable to pigments and extenders that are stable at 105 °C.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 15528, *Paints, varnishes and raw materials for paints and varnishes — Sampling*

ISO 18451-1, *Pigments, dyestuffs and extenders — Terminology — Part 1: General terms*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 18451-1 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

## 4 Apparatus

- 4.1 **Weighing bottle**, squat form, wide-mouthed, with ground glass stopper.
- 4.2 **Oven**, capable of maintaining the temperature at  $(105 \pm 2)$  °C.
- 4.3 **Balance**, accurate to 0,1 mg.
- 4.4 **Desiccator**, containing an efficient desiccant.

## 5 Sampling

Take a representative sample of the product under test, in accordance with ISO 15528.

## 6 Procedure

### 6.1 Number of determinations

Carry out the determination in duplicate.

### 6.2 Test portion

Heat the weighing bottle (4.1), with the stopper removed, in the oven (4.2) at  $(105 \pm 2)$  °C for 2 h. Allow to cool in the desiccator (4.4), insert the stopper and weigh to the nearest 1 mg.

Spread  $(10 \pm 1)$  g of the sample in a uniform layer on the bottom of the weighing bottle, insert the stopper and weigh to the nearest 1 mg.

It can be necessary to reduce the mass of the test portion for pigments and extenders with a high bulk volume. The use of a test portion smaller than that specified shall be stated in the test report.

### 6.3 Determination

Heat the weighing bottle and contents, with the stopper removed, in the oven (4.2) at  $(105 \pm 2)$  °C for a minimum of 1 h. Allow to cool in the desiccator (4.4), insert the stopper and weigh to the nearest 1 mg. Repeat the heating for at least 30 min, allow to cool in the desiccator (4.4), insert the stopper and again weigh to the nearest 1 mg. Repeat the procedure until two successive results differ by no more than 5 mg. Record the lower mass.

If the results of the two determinations differ by more than 10 % of the higher value, repeat the whole procedure in this clause.

## 7 Expression of results

The matter volatile at 105 °C is calculated as the mass fraction  $\omega$  in percent by [Formula \(1\)](#):

$$\omega = \frac{m_1 - m_2}{m_1 - m_0} \times 100 \quad (1)$$

Where,

$\omega$  is the matter volatile at 105 °C of the test portion, as mass fraction in percent;

$m_1$  is the mass, in grams, of the weighing bottle and the test portion;

$m_2$  is the mass, in grams, of the weighing bottle and the residue;

$m_0$  is the mass, in grams, of the weighing bottle.

Calculate the mean of the two determinations, if they do not differ by more than 10 % of the higher value and report the result to the nearest 0,1 %. Report results between 0 % and 0,1 % as “less than 0,1 %”.

## 8 Test report

The test report shall contain at least the following information:

- a) all details necessary to identify the product tested;
- b) a reference to this document, i.e. ISO 787-2:2021;
- c) the result of the test as indicated in [Clause 7](#);