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# INTERNATIONAL STANDARD



# 3251

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

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## Paint media — Determination of volatile and non-volatile matter

*Liants pour peintures — Détermination des matières volatiles et non volatiles*

First edition — 1974-11-15

**ITeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

ISO 3251:1974

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**Descriptors :** paints, solvents, chemical analysis, determination of content, volatile matter, dry matter.

Price based on 2 pages

## FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

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.

International Standard ISO 3251 was drawn up by Technical Committee ISO/TC 35, *Paints and varnishes* and circulated to the Member Bodies in May 1973.

It has been approved by the Member Bodies of the following countries :

Brazil	Iran	<u>ISO 3251:1974</u>
Bulgaria	Ireland	Switzerland
Canada	Israel	Thailand
Chile	Netherlands	Turkey
Czechoslovakia	Poland	United Kingdom
Egypt, Arab Rep. of	Portugal	U.S.A.
France	Romania	Yugoslavia
Germany	South Africa, Rep. of	
India	Spain	

The Member Body of the following country expressed disapproval of the document on technical grounds :

New Zealand

# Paint media – Determination of volatile and non-volatile matter



INTERNATIONAL STANDARD ISO 3251-1974 (E)/AMENDMENT

Published 1974-12-15

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## AMENDMENT

[ISO 3251:1974](https://standards.iteh.ai/catalog/standards/sist/e049e841-0ce5-436e-bc6e-6b5d54dca4c8/iso-3251-1974)

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### Foreword (Inside front cover)

The ISO Member Body for New Zealand has now withdrawn its disapproval of this International Standard. New Zealand should therefore be included in the list of countries whose Member Bodies have approved the document.

approximately 7.5 mm in diameter.

or wire, and test portion in the oven adjusted at  $105 \pm 2$  °C and leave them in the oven at that temperature for 3 h.

#### 4.2 Thin glass rod or metallic wire.

4.3 Air oven, capable of maintaining the specified temperature.

6.3 When the agreed or specified period of heating is completed, transfer the dish and rod or wire to a desiccator, allow to cool to room temperature and re-weigh to the nearest milligram.

## 5 SAMPLING

A representative sample of the product to be tested shall be taken as described in ISO 842.

6.4 Perform at least two determinations on the same prepared sample.

**7 EXPRESSION OF RESULTS**

**7.1 Calculation**

Calculate the content of volatile matter or of non-volatile matter as a percentage by mass of the product tested, by the following formulae :

$$V = 100 \frac{(m_1 - m_2)}{m_1}$$

$$NV = 100 \frac{m_2}{m_1}$$

where

V is the content of volatile matter, as a percentage by mass;

NV is the content of non-volatile matter, as a percentage by mass;

m<sub>1</sub> is the mass, in milligrams, of the test portion before heating;

m<sub>2</sub> is the mass, in milligrams, of the test portion after heating under the specified conditions.

Report the result in percent by mass to the first decimal place, as the arithmetic mean of the determinations performed.

**7.2 Repeatability**

The difference between results obtained by the same operator within a short time interval with the same

apparatus under constant operating conditions on identical test material shall, at the 95 % confidence level, not exceed 1 % (i.e. 1 g per 100 g of sample).

**7.3 Reproducibility**

The difference between results obtained by different operators in different laboratories on identical test material shall, at the 95 % confidence level, not exceed 2 % (i.e. 2 g per 100 g of sample).

NOTE – Greater differences than those specified in 7.2 and 7.3 may result from using dishes of different materials. It is therefore necessary, where such greater differences occur, that the material of the dish be agreed between the interested parties.

**8 TEST REPORT**

The test report shall include the following information :

- a) a reference to this International Standard or to a corresponding national standard;
- b) the type and identification of the product tested;
- c) the temperature and period of heating and type of stove used (for example convection or air circulation stove);
- d) any deviation, by agreement or otherwise, from the test procedure described;
- e) the result of the test, i.e. the percentage content of volatile matter and, if required, of non-volatile matter;
- f) the date of the test.

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ANNEX

RECOMMENDED TEST CONDITIONS FOR CERTAIN PAINT MEDIA

Medium	Temperature °C	Drying time h
Alkyd and epoxide ester resins	125	1
Non-modified epoxide resins	140	3
Phenolic resins	135	1
Acrylic resins	} By agreement between the interested parties.	
Amine resins (urea formaldehyde or melamine formaldehyde)		
Bituminous products		