

# ISO

47

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

## ISO RECOMMENDATION R 1907

**ITeX STANDARD PREVIEW**  
CRESYLIC ACID AND XYLENOLS  
(standards.iteh.ai)  
FOR INDUSTRIAL USE

ISO/R 1907:1971  
**DETERMINATION OF RESIDUE ON DISTILLATION**  
68d126f2d066/iso-r-1907-1971

1st EDITION  
May 1971

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## BRIEF HISTORY

The ISO Recommendation R 1907, *Cresylic acid and xylenols for industrial use – Determination of residue on distillation*, was drawn up by Technical Committee ISO/TC 47, *Chemistry*, the Secretariat of which is held by the Ente Nazionale Italiano di Unificazione (UNI).

Work on this question led to the adoption of Draft ISO Recommendation No. 1907, which was circulated to all the ISO Member Bodies for enquiry in November 1969. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Australia	Israel	Spain
Belgium	Italy	Switzerland
Chile	Japan	Thailand
Czechoslovakia	Netherlands	Turkey
France	New Zealand	U.A.R.
Germany	Poland	United Kingdom
Greece	Portugal	U.S.S.R.
Hungary	Romania	
India	South Africa, Rep. of	

No Member Body opposed the approval of the Draft.

This Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided to accept it as an ISO RECOMMENDATION.

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ISO Recommendation

R 1907

May 1971

**CRESYLIC ACID AND XYLENOLS**  
**FOR INDUSTRIAL USE**  
**DETERMINATION OF RESIDUE ON DISTILLATION**

WARNING. These materials burn the skin and can be absorbed into the system through the skin. It is essential for the sampler to wear protective gloves, for example of polyvinyl chloride, and also a face shield. Inhalation of the vapours from hot material is to be avoided.

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**1. SCOPE AND FIELD OF APPLICATION**

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This ISO Recommendation describes a method for the determination of residue on distillation of cresylic acid of high *m*-cresol content, cresylic acid of high *o*-cresol content and xlenols for industrial use.

**2. SAMPLING**

Apply the principles given in ISO Recommendation R . . .\*. The following principles should also be observed :

Place the laboratory sample representative of the material taken from the bulk in a clean, dry, dark-coloured, glass-stoppered bottle of such a size that it is nearly filled by the sample. If it is necessary to seal this bottle, care should be taken to avoid contaminating the contents.

**3. PRINCIPLE**

Distillation of a known mass of the sample under carefully controlled conditions and determination of the mass of residue obtained.

\* Sampling of chemical products will form the subject of a future ISO Recommendation.

#### 4. PROCEDURE

For the distillation, use the method described in ISO Recommendation R 1906, *Cresylic acid and xylenols for industrial use – Determination of distillation range*. The following particulars and modifications should be introduced in the above-mentioned ISO Recommendation.

##### 4.1 Test portion

Instead of measuring 100 ml of the laboratory sample, weigh, to the nearest 0.1 g, 100 g of the laboratory sample into the distillation flask, previously tared.

##### 4.2 Determination

When all the water has distilled over and the rate of distillation has been increased to 3 to 4 ml per minute, continue the distillation without intermediate measurements, until either the dry point or the pitching point (see clause 4.5 of ISO/R 1906) is reached and then immediately extinguish the flame of the burner. Allow the flask and contents to cool, weigh and determine by difference the mass of total residue.

#### 5. EXPRESSION OF RESULTS

Report the mass of any residue as a percentage by mass.

NOTE. – Tests on residue-free samples leave a deposit weighing up to 2 g and it is the commercial practice to regard products leaving not more than 2 g as free from residue. When the mass of residue exceeds 2 g, the mass recorded (and not the mass diminished by 2 g) is taken as the residue.

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#### 6. Test report

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The test report should give the following particulars :

- (a) the reference of the method used;
- (b) the results and the method of expression used;
- (c) any unusual features noted during the determination;
- (d) any operation not included in this ISO Recommendation or regarded as optional.

## ANNEX

This document forms one of a series of ISO Recommendations on methods of test for phenol, cresols, cresylic acid and xylenols for industrial use.

The complete list of the Recommendations already prepared or in course of preparation is as follows :

### PHENOL, *o*-CRESOL, *m*-CRESOL, *p*-CRESOL, CRESYLIC ACID, XYLENOLS

- ISO/R 1897, *Determination of water by the Karl Fischer method.*
- ISO/R 1898, *Determination of water by the Dean and Stark method.*
- ISO/R 1899, *Determination of neutral oils and pyridine bases.*

### PHENOL, *o*-CRESOL, *m*-CRESOL, *p*-CRESOL

- ISO/R 1900, *Determination of residue on evaporation.*
- ISO/R 1901, *Determination of crystallizing point.*
- ISO/R 2208, *Determination of crystallizing point after drying with a molecular sieve.\**
- ISO/R 1902, *Test for impurities insoluble in sodium hydroxide solution – Visual test.*
- ISO/R 2273, *Determination, after combustion, of total sulphur (conductimetric method) and chlorine content (potentiometric or spectrophotometric method).\**

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### LIQUEFIED PHENOL, *m*-CRESOL, CRESYLIC ACID, XYLENOLS

- ISO/R 1903, *Determination of density at 20 °C.* [ISO/R 1907:1971  
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### PHENOLS

- ISO/R 1904, *Determination of phenol content – Bromination method.\**

### LIQUEFIED PHENOL

- ISO/R 1905, *Test for impurities insoluble in water – Visual test.*

### CRESYLIC ACID AND XYLENOLS

- ISO/R 1906, *Determination of distillation range.*
- ISO/R 1907, *Determination of residue on distillation.*
- ISO/R 1908, *Test for absence of hydrogen sulphide.*
- ISO/R 1909, *Measurement of colour.*
- ISO/R 1910, *Determination of *o*-cresol content.*

### CRESYLIC ACID

- ISO/R 1911, *Determination of *m*-cresol content.*

NOTE. – A laboratory sample of not less than 500 ml (for phenol and cresols) or 1000 ml (for cresylic acid and xylenols) is necessary to carry out the whole series of tests described in these documents.

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\* At present at the stage of Draft ISO Recommendation.

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