

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 1903

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

STANDARD PREVIEW
FOR INDUSTRIAL USE
(standards.iteh.ai)

DETERMINATION OF DENSITY AT 20 °C

<https://standards.iteh.ai/catalog/standards/sist/a3498cde-efff-43bd-910a-ef5f4b1a2223/iso-r-1903-1971>

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BRIEF HISTORY

The ISO Recommendation R 1903, *Liquefied phenol, m-cresol, cresylic acid and xylenols for industrial use – Determination of density at 20 °C*, 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. 1903, 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	India	Spain
Austria	Israel	Switzerland
Belgium	Italy	Thailand
Chile	Netherlands	Turkey
Czechoslovakia	New Zealand	U.A.R.
France	Poland	United Kingdom
Germany	Portugal	U.S.S.R.
Greece	Romania	
Hungary	South Africa, Rep. of	

The following Member Body opposed the approval of the Draft

Japan

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

LIQUEFIED PHENOL, *m*-CRESOL, CRESYLIC AND XYLENOLS
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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.

Phenols are extremely hygroscopic, and care should be taken to avoid contamination with atmospheric or other moisture.

1. SCOPE AND FIELD APPLICATION

This ISO Recommendation describes a method for the determination of density at 20 °C of liquefied phenol, *m*-cresol, cresylic acid and xlenols for industrial use.

NOTE. — A mixture of about 80 % phenol for industrial use and 20 % water (V/V) is commonly called "liquefied phenol".

2. SAMPLING

Apply the principles given in ISO Recommendation R 758, *Method for the determination of density of liquids at 20 °C*. * 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

Determination of the mass at 20 °C of a volume of the material contained in a density bottle, and determination of the volume of the latter by determining the mass of a corresponding volume of water at 20 °C. The density is obtained by dividing the mass of the material by the capacity of the bottle.

4. PROCEDURE

Carry out the determination as described in ISO Recommendation R 758, *Method for the determination of density of liquids at 20 °C*.

5. TEST REPORT

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.

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

ANNEX

This document forms one of a series of ISO Recommendations on methods of test for phenol, cresols, cresylic acid and xlenols 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 1903:1971](https://standards.iteh.ai/catalog/standards/sist/a3498cde-ef5f4b1a2223/iso-r-1903-1971)

PHENOL

<https://standards.iteh.ai/catalog/standards/sist/a3498cde-ef5f4b1a2223/iso-r-1903-1971>

- 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 xlenols) is necessary to carry out the whole series of tests described in these documents.

* At present at the stage of Draft ISO Recommendation.