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INTERNATIONAL STANDARD ISO 1897/VI

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

Phenol, *o*-cresol, *m*-cresol, *p*-cresol, cresylic acid and xylenols for industrial use — Methods of test — Part VI : Test for absence of hydrogen sulphide (Cresylic acid and xylenols only)

Phénol, o-crésol, m-crésol, p-crésol, acide crésylique et xylénols à usage industriel — Méthodes d'essai — Partie VI : Contrôle de l'absence de sulfure d'hydrogène (Acide crésylique et xylénols uniquement)

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Descriptors : phenols, phenol, cresols, xylenol, chemical analysis, determination of content, water, volumetric analysis, Karl Fischer reagent.

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.

Prior to 1972, the results of the work of the technical committees were published as ISO Recommendations; these documents are in the process of being transformed into International Standards. As part of this process, Technical Committee ISO/TC 47, *Chemistry*, has reviewed ISO Recommendation R 1908-1971 and found it technically suitable for transformation. Number 1908, however, has been changed to 1897/VI. International Standard ISO 1897/VI therefore replaces ISO Recommendation R 1908-1971, to which it is technically identical.

ISO Recommendation R 1908 had been approved by the member bodies of the following countries :

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

No member body had expressed disapproval of the Recommendation.

The member body of the following country disapproved the transformation of the Recommendation into an International Standard :

Netherlands

Printed in Switzerland

Phenol, *o*-cresol, *m*-cresol, *p*-cresol, cresylic acid and xylenols for industrial use — Methods of test — Part VI : Test for absence of hydrogen sulphide (Cresylic acid and xylenols only)

1 SCOPE AND FIELD OF APPLICATION

This part of ISO 1897 specifies a method of testing for the absence of hydrogen sulphide and is applicable to cresylic acid of high *o*-cresol content, cresylic acid of high *m*-cresol content and xylenols, for industrial use.

NOTE — This is a simple test for the absence of hydrogen sulphide and cannot be used to obtain quantitative results.

This document should be read in conjunction with part I (see annex).

2 PRINCIPLE

Formation of a brown colour on lead acetate paper due to reaction with any hydrogen sulphide present in a test portion.

3 REAGENT

During the test, use only reagents of recognized analytical grade, and only distilled water or water of equivalent purity.

3.1 Lead acetate paper

Immerse strips of double acid washed filter paper, approximately 50 mm × 100 mm, for 1 min in a solution prepared by dissolving 10 g of lead acetate in 90 ml of water and adding 5 ml of glacial acetic acid and 10 ml of glycerol. Drain off the liquid from the strips, suspend them in an atmosphere free from hydrogen sulphide and allow to dry as completely as possible at ambient temperature. Then trim off and discard 25 mm from the top and bottom of each strip. Cut the strips into 25 mm squares and store in a glass-stoppered, airtight container.

4 APPARATUS

Ordinary laboratory apparatus.

5 PROCEDURE

Measure 20 ml of the test sample into a 100 ml conical flask.

Place one of the lead acetate paper squares (3.1) over the mouth of the flask and heat the latter in a boiling water bath for 5 min.

6 EXPRESSION OF RESULTS

Report whether any brown, as distinct from yellow, colour has developed, indicating the presence of hydrogen sulphide.

ANNEX

ISO PUBLICATIONS RELATING TO (A) PHENOL, (B) *o*-CRESOL, (C) *m*-CRESOL, (D) *p*-CRESOL, (E) CRESYLIC ACID, AND (F) XYLENOLS, FOR INDUSTRIAL USE

Applicability						
A[1]	B[2]	C	D[2]	E	F	ISO 1897/I — General.
A	B	C	D	E	F	ISO 1897/II — Determination of water — Dean and Stark method.
A	B	C	D	E	F	ISO 1897/III — Determination of neutral oils and pyridine bases.
A	B	C	D			ISO 1897/IV — Visual test for impurities insoluble in sodium hydroxide solution.
A						ISO 1897/V — Visual test for impurities insoluble in water.
				E	F	ISO 1897/VI — Test for absence of hydrogen sulphide.
				E	F	ISO 1897/VII — Measurement of colour.
				E	F	ISO 1897/VIII — Determination of *o*-cresol content.
				E		ISO 1897/IX — Determination of *m*-cresol content.
A	B	C	D			ISO/R 1900 — Determination of residue on evaporation.
A	B	C	D			ISO/R 1901 — Determination of crystallizing point.
A[3]						ISO 1904 — Determination of phenols content — Bromination method.
				E	F	ISO/R 1906 — Determination of distillation range.
				E	F	ISO/R 1907 — Determination of residue on distillation.
A	B	C	D			ISO 2208 — Determination of crystallizing point after drying with a molecular sieve.

1) In the case of phenol, the determination of density at 20 °C specified in ISO 1897/I is applicable only to liquefied phenol.

2) The determination of density at 20 °C specified in ISO 1897/I is not applicable to these products.

3) Applicable only to liquefied phenol.