

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION

R 1908

CRESYLIC ACID AND XYLENOLS

FOR INDUSTRIAL USE

TEST FOR ABSENCE OF HYDROGEN SULPHIDE

1st EDITION

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BRIEF HISTORY

The ISO Recommendation R 1908, *Cresylic acid and xylenols for industrial use – Test for absence of hydrogen sulphide*, 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. 1908, 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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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.

1. SCOPE AND FIELD OF APPLICATION

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

NOTE. - This is a simple qualitative test for the absence of hydrogen sulphide and is in no way quantitative.

2. SAMPLING

Apply the principles given in ISO Recommendation . . .*. 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

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

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

4. REAGENT

Distilled water or water of equivalent purity should be used in the test.

4.1 *Lead acetate paper*

Immerse strips of double acid washed filter paper, approximately 50 mm × 100 mm, for 1 minute 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 pure glycerol. Drain off the liquid from the strips, suspend them in a hydrogen sulphide free atmosphere 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.

5. APPARATUS

Ordinary laboratory apparatus.

6. PROCEDURE

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

Place a lead acetate paper (4.1) over the mouth of the flask and heat the latter in a boiling water bath for 5 minutes.

7. EXPRESSION OF RESULTS

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

8. 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.