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ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

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ISO RECOMMENDATION
R 1909

CRESYLIC ACID AND XYLENOLS

FOR INDUSTRIAL USE

MEASUREMENT OF COLOUR

1st EDITION

May 1971

For each individual country the only valid standard is the national standard of that country.

Printed in Switzerland

Also issued in French and Russian. Copies to be obtained through the national standards organizations.

BRIEF HISTORY

The ISO Recommendation R 1909, *Cresylic acid and xylenols for industrial use – Measurement of colour,* 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. 1909, 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.

ISO Recommendation R 1909 May 1971

CRESYLIC ACID AND XYLENOLS

FOR INDUSTRIAL USE

MEASUREMENT OF COLOUR

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 for the measurement of colour of cresylic acid of high *m*-cresol content, cresylic acid of high *o*-cresol content and xylenols, for industrial use.

2. SAMPLING

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

Place a 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

Comparison of the colour of the sample against that of standard solutions specified in section 6 below. (The colour of cresols is liable to darken on keeping and on exposure to light.)

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

4. REAGENTS

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

4.1 *Cobalt sulphate*, crystalline ($CoSO_4.7H_2O$).

4.2 *Copper sulphate*, crystalline ($CuSO_4.5H_2O$).

4.3 *Potassium dichromate*, crystalline ($K_2Cr_2O_7$).

4.4 *Potassium cyanoferrate (III)* [$K_3Fe(CN)_6$].

5. APPARATUS

Ordinary laboratory apparatus, and

5.1 Two matched *Nessler cylinders*, capacity 50 ml.

6. PREPARATION OF COLOUR STANDARD MATCHING SOLUTION

Prepare the following colour standard matching solutions, dissolving the indicated quantities of reagents per 1000 ml of water, in a one-mark volumetric flask.

Colour No.	Mass of reagent g	Reagent
1	0.90 0.015	Cobalt sulphate (4.1) Potassium dichromate (4.3)
2	6.0 0.015	Cobalt sulphate (4.1) Potassium dichromate (4.3)
3	4.0 0.075 1.0	Cobalt sulphate (4.1) Potassium dichromate (4.3) Copper sulphate (4.2)
4	22.5 0.06	Cobalt sulphate (4.1) Potassium dichromate (4.3)
5	10.0 0.18 2.5	Cobalt sulphate (4.1) Potassium dichromate (4.3) Copper sulphate (4.2)
6	70.0 0.5	Cobalt sulphate (4.1) Potassium dichromate (4.3)
7	320.0	Potassium cyanoferrate (III) (4.4)
8	Any cresylic acid darker than Colour No. 7	

The tint of the even-numbered colours is red and that of the odd-numbered colours is yellow.

The standard colour solution No. 7 should be freshly prepared on the day of the test. The other solutions keep well and may be used up to 1 month from the date of preparation.