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मानक

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“Step Out From the Old to the New”

IS 15134 (2002): 2-Nitro-4-Methoxy Aniline, Technical [PCD 9: Organic Chemicals Alcohols and Allied Products and Dye Intermediates]



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“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक

2-नाइट्रो-4-मिथोक्सी एनीलिन, टेक्नीकल — विशिष्टि

Indian Standard

2-NITRO-4-METHOXY ANILINE,
TECHNICAL — SPECIFICATION

ICS 71.080.30

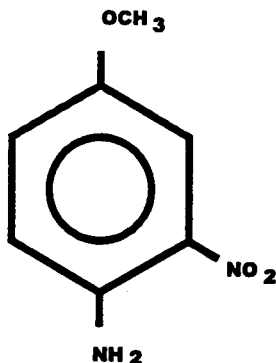
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BUREAU OF INDIAN STANDARDS
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NEW DELHI 110002

FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards, after the draft finalized by the Dyes Intermediate Sectional Committee had been approved by the Petroleum, Coal and Related Products Division Council.

2-Nitro-4-methoxy aniline is an intermediate for dyestuffs and pigments. It is also known as Bordeaux GP base and CI Azoic diazo component 1. The material is represented by the following formula:



2-NITRO-4-METHOXY ANILINE

MOLECULAR MASS = 168.15
[CAS REGISTRY No.: 96-96-8]

The composition of the Committee responsible for formulation of this standard is given in Annex C.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

2-NITRO-4-METHOXY ANILINE, TECHNICAL — SPECIFICATION

1 SCOPE

This standard prescribes the requirements and the methods of sampling and tests for 2-Nitro-4-methoxy aniline.

2 REFERENCES

The following Indian Standards contain provisions which, through reference in this text constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreement based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards given below:

IS No.	Title
1070 : 1992	Reagent grade water (<i>third revision</i>)
5299 : 2001	Method of sampling and test for dye intermediates (<i>first revision</i>)

3 REQUIREMENTS

3.1 Description

The material shall be in the form of dry reddish brown powder and shall be free from visible impurities.

3.2 The material shall also comply with the requirements given under Table 1.

Table 1 Requirements For 2-Nitro-Methoxy-Aniline

Sl No.	Characteristics	Requirement	Method of Test, Ref to
(1)	(2)	(3)	(4)
i)	Moisture, percent by mass, <i>Max</i>	1.0	10 of IS 5299
ii)	Assay, percent by mass, <i>Min</i>	97.0	ANNEX A
iii)	Melting range of dry material <i>Min</i> , °C	122-124	9 of IS 5299
iv)	Matter insoluble in diazo, percent by mass, <i>Max</i>	0.5	ANNEX B

4 PACKING AND MARKING

4.1 Packing

The material shall be packed as agreed to between the purchaser and the supplier.

4.2 Marking

Each container shall be securely closed and shall bear legibly and indelibly the following information:

- a) Name of the material;

- b) Indication of the source of manufacture;
c) Net mass;
d) Lot or batch number; and
e) Month and year of manufacture.

4.2.1 BIS Certification Marking

Each container may also be marked with the Standard Mark.

4.2.1.1 The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

5 SAMPLING

5.1 The method of drawing representative samples of the material shall be as prescribed in 4 of IS 5299.

5.2 Number of Tests

Tests for description, melting point and assay shall be done on each sample. Tests for matter insoluble in diazo and moisture content shall be performed on the composite sample.

5.3 Criteria for Conformity

5.3.1 For Individual Samples

The lot shall be declared as conforming to the requirements of the description, melting point and assay, if each of the individual test results satisfies the relevant requirements given at 3.1 and in Table 1.

5.3.2 For Composite Samples

For declaring the conformity of the lot to the requirements of matter insoluble in diazo and moisture content, while tested on the composite sample, the test result shall satisfy the relevant requirements given in Table 1.

6 TEST METHODS

6.1 Tests shall be conducted according to the methods prescribed and as indicated in col 4 of Table 1.

6.2 Quality of Reagents

Unless specified otherwise, pure chemicals and distilled water (*see* IS 1070) shall be employed in tests.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the results of analysis.

ANNEX A

[Table 1, Sl No. (ii)]

METHOD FOR DETERMINATION OF 2-NITRO-4-METHOXY ANILINE
CONTENT (ASSAY)

A-1 APPARATUS

A-1.1 Burette — 50 ml.

A-1.2 Beaker — 1000 ml.

A-2 REAGENTS

A-2.1 Concentrated Hydrochloric Acid

A-2.2 Glacial Acetic Acid

A-2.3 Sodium Nitrite Solution — 0.5 N.

A-2.4 Starch — Potassium iodine paper.

A-3 PROCEDURE

Weigh accurately 4.000 g of the sample into the beaker containing 100 ml glacial acetic acid, warm the beaker to dissolve the material completely, add 50 ml

concentrated hydrochloric acid, cool to 0-5°C and titrate with 0.5N sodium nitrite solution to a distinct blue ring on starch potassium iodide paper. The end point should persist for 5 minutes without further addition of sodium nitrite solution. Preserve the solution for diazo insolubles.

A-4 CALCULATION

$$\text{Assay, percent by mass} = \frac{V \times N \times 16.815}{M}$$

where

 V = Volume, in ml, of sodium nitrite solution; N = Normality of sodium nitrite solution; and M = Mass in g of sample taken for test.

ANNEX B

[Table 1, Sl No. (iv)]

METHOD FOR DETERMINATION OF MATTER INSOLUBLE IN DIAZO

B-1 APPARATUS

B-1.1 Sintered Glass Crucibles G-4 Grade — 50 ml.

B-1.2 Desiccator

B-2 PROCEDURE

Filter the solution preserved in A-3 through a tared G4 sintered glass crucible keeping the temperature at 0-5°C throughout the filtration, wash with cold water till the filtrate is colourless, dry the crucible at

100 ± 5°C to constant mass.

B-3 CALCULATION

$$\text{Insoluble in diazo, percent by mass} = \frac{(W_2 - W_1) \times 100}{M}$$

where

 W_2 = Mass of crucible with insolubles, W_1 = Mass of crucible, and M = Mass of sample taken for test.

ANNEX C

(Foreword)

COMMITTEE COMPOSITION

Dyes Intermediate Sectional Committee, PCD 11

<i>Organization</i>	<i>Representative(s)</i>
Atul Limited, Valsad, Gujarat	DR H. KAIWAR (<i>Chairman</i>) SHRI H. B. DHUVAD (<i>Alternate I</i>) DR J. G. DESAI (<i>Alternate II</i>) SHRI A. R. DESAI (<i>Alternate III</i>)
Ajanta Chemical Industries, New Delhi	SHRI S. D. BHARDWAJ SHRI KAPIL DEV (<i>Alternate</i>)
Colour-Chem Ltd, Mumbai	DR S. SIDDHAN SHRI A. K. CHATTERJEE (<i>Alternate I</i>) SHRI K. K. MEHTA (<i>Alternate II</i>)
Clariant India Ltd, Mumbai	DR J. N. SHAH SHRI K. S. RINDANI (<i>Alternate</i>)
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Hindustan Organic Chemicals Ltd, Rasayani	SHRI R. B. BHANDARE DR S. S. PATIL (<i>Alternate</i>)
Indian Dyestuff Industries Ltd, Mumbai	DR S. R. DESHMUKH SHRI S. D. PAWAR (<i>Alternate</i>)
Indian Chemical Manufacturers Association, Kolkata	SHRI G. C. DESAI
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Sudarshan Chemical Industries Ltd, Pune	SHRI R. SATYANARAYAN SHRI P. K. PARAB (<i>Alternate</i>)
The Dyestuff Manufacturer's Association of India, Mumbai	DR M. G. NARSIAN DR. S. C. AMIN (<i>Alternate</i>)
The Gujarat Small Scale Dyestuffs Manufacturer's Association, Ahmedabad	SHRI R. S. PATEL SHRI R. R. SHAH (<i>Alternate</i>)
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DR (SHRIMATI) VIJAY MALIK
Director (PCD), BIS

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This Indian Standard has been developed from Doc : No. PCD 11(1449).

Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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