

Draft Indian Standard
**SODIUM CARBONATE, ANHYDROUS AND
MONOHYDRATE, PHOTOGRAPHIC GRADE —
SPECIFICATION**
(Second Revision)

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ICS 37.040.30

Electroplating Chemicals and Photographic
Materials Sectional Committee, CHD 05

Last date for comments: 21st March 2024

Electroplating Chemicals and Photographic Materials Sectional Committee, CHD 05

NATIONAL FOREWORD

(Formal clauses shall be added later)

This Standard is one of a series of specifications for photographic grade chemicals which are commonly used in the processing of sensitized photographic materials. These specifications have been prepared to establish criteria of purity which will provide a practical and economical grade and prevent possible faulty processing which might be caused by chemicals of inferior quality and to furnish the manufacturers, suppliers and processors with reliable and readily available specifications for photographic chemicals of satisfactory quality.

IS 6155 was originally published in 1971 and was revised in 1987 under the title 'Specification for Sodium Carbonate, Monohydrate, Photographic Grade'. Sodium carbonate, monohydrate is used in the processing of sensitized photographic materials. It finds use in preparing photographic developers, particularly in colour films where high purity of the ingredients is very essential and extremely important. It has a chemical formula $\text{Na}_2\text{CO}_3 \cdot \text{H}_2\text{O}$ and molecular mass 124. In the first revision, the material suitable for only photographic industry was covered and the requirement for assay was modified. Also, the requirements for free alkali, bicarbonate and reaction to ammonical silver nitrate were added.

The requirements of Sodium Carbonate, Anhydrous, Photographic Grade was specified in another separate standard namely IS 12121 : 1987 'Specification for Sodium Carbonate, Anhydrous, Photographic Grade'. Sodium carbonate, anhydrous is used in the processing of sensitized photographic materials. It has the chemical formula Na_2CO_3 and molecular mass 106.

The technical committee responsible for formulation of these standards decided to further revise IS 6155 by adopting ISO 424 : 1994 on dual number basis. ISO 424 : 1994 specifies the requirements for two grades of sodium carbonate; namely anhydrous and monohydrate. Accordingly the title of the standard is being modified to 'Sodium Carbonate, Anhydrous and Monohydrate, Photographic Grade — Specification'. This revision will also supersede IS 12121 : 1987.

The text of ISO Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words 'International Standard' appears referring to this standard, they should be read as 'Indian Standard'.
- b) Comma (,) has been used as a decimal marker, while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standards for which Indian Standards do not exist. So, the technical committee has reviewed the provisions of the following International Standards/ documents referred in this adopted standard and has decided that they are acceptable for use in conjunction with this Standard:

<i>International Standards</i>	<i>Title</i>
ISO 10349-1: 2002	Photography — Photographic grade chemicals — Test methods — Part 1: General.
ISO 10349-5: 1992	Photography — Photographic grade chemicals — Test methods — Part 5: Determination of heavy metals and iron content.
ISO 10349-6:1992	Photography — Photographic grade chemicals — Test methods — Part 6: Determination of halide content.
ISO 10349-9:1992	Photography — Photographic-grade chemicals — Test methods — Part 9: Reaction to ammoniacal silver nitrate.

In this adopted standard, reference appears to certain International Standards/documents where the standard atmospheric conditions to be observed are stipulated which are not applicable to tropical/subtropical countries. The applicable standard atmospheric conditions for Indian conditions are (27 ± 2) °C and (65 ± 5) percent relative humidity and shall be observed while using this standard.

The standard also makes a reference to the BIS certification marking of the product. Detail of which are given in Annex A.

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: 2022 'Rules for rounding off numerical values (*second revision*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

National Annex A

(National Foreword)

A-1 BIS CERTIFICATION MARKING

The product may also be marked with the Standard Mark.

A-1.1 The use of the Standard Mark is governed by the provisions of the Bureau of Indian Standards Act, 2016 and the Rules and Regulations made thereunder. The details of the conditions under which the licence for use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.