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Sodium chlorate for industrial use — Determination of moisture content — Gravimetric method

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FOREWORD

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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.

International Standard ISO 2462 was drawn up by Technical Committee ISO/TC 47, *Chemistry*.

It was approved in January 1972 by the Member Bodies of the following countries :

Austria	India	South Africa, Rep. of
Belgium	Ireland	Spain
Chile	Korea, Dem.P.Rep. of	Sweden
Czechoslovakia	Netherlands	Switzerland
Egypt, Arab Rep. of	New Zealand	Thailand
France	Poland	United Kingdom
Germany	Portugal	U.S.S.R.
Hungary	Romania	

No Member Body expressed disapproval of the document.

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Sodium chlorate for industrial use — Determination of moisture content — Gravimetric method

1 SCOPE

This International Standard specifies a method for the determination of the moisture content of sodium chlorate for industrial use.

2 FIELD OF APPLICATION

The method is applicable to products with moisture content greater than 0,02 % (*m/m*). The method is not applicable to the analysis of mixtures based on sodium chlorate, such as herbicides, insecticides, etc.

3 PRINCIPLE

Heating a test portion, spread in the form of a thin layer, at 105 °C for 2 h. The loss of mass represents the moisture content of the test portion.

4 APPARATUS

Ordinary laboratory apparatus and

4.1 Weighing bottle, approximately 50 mm in diameter, with ground glass lid.

4.2 Electric oven, capable of being controlled at 105 ± 2 °C. Check this temperature by means of a thermometer placed so that its bulb is close to the weighing bottle used during the test.

NOTE — Ensure that the maximum temperature of the oven used can never exceed 250 °C so as to avoid risk of an explosion in case of failure of the regulator.

5 PROCEDURE

5.1 Warning

Sodium chlorate induces combustion. Avoid storage or handling close to a source of heat. Avoid all contact of the salt or its solutions with combustible materials (clothes, wood, straw, rags, fatty substances, etc.) which are likely to catch fire or give rise to an explosive mixture. Wash copiously with water any materials accidentally impregnated with sodium chlorate.

5.2 Test portion

Weigh, to the nearest 0,000 2 g, 5 ± 0,1 g of the test sample.

5.3 Determination

Weigh the empty weighing bottle (4.1), to the nearest 0,000 2 g after leaving it for 30 min in the oven (4.2) controlled at 105 ± 2 °C and cooling it in a desiccator.

Spread the test portion in a thin layer in the weighing bottle (4.1) and weigh the whole to the nearest 0,000 2 g.

Place the weighing bottle and its contents, with the cover tilted, in the oven (4.2) controlled at 105 ± 2 °C, and leave it there for 2 h.

Remove the weighing bottle, and place it in the desiccator to cool, then close it and weigh it again to the nearest 0,000 2 g.

6 EXPRESSION OF RESULTS

Moisture content is given, as a percentage by mass, by the formula :

$$(m_1 - m_2) \times \frac{100}{m_0}$$

where

m_0 is the mass, in grams, of the test portion (5.2);

m_1 is the mass, in grams, of the weighing bottle and test portion before heating;

m_2 is the mass, in grams, of the weighing bottle and test portion after heating.

7 TEST REPORT

The test report shall include 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 International Standard, or regarded as optional.