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Crude sodium borates for industrial use — Determination of loss in mass after heating at 900 °C

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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 2218 was drawn up by Technical Committee ISO/TC 47, *Chemistry.*

It was approved in August 1971 by the Member Bodies of the following countries :

Austria	Israel	Sweden
Belgium	Italy	Switzerland
Czechoslovakia	Netherlands	Thailand
Egypt, Arab Rep. of	New Zealand	Turkey
France	Poland	United Kingdom
Germany	Portugal	U.S.A.
Hungary	Romania	U.S.S.R.
India	South Africa, Rep. of	Yugoslavia
Ireland	Spain	

No Member Body expressed disapproval of the document.

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INTERNATIONAL STANDARD ISO 2218-1972 (E)

Crude sodium borates for industrial use — Determination of loss in mass after heating at 900 °C

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a gravimetric method for the determination of loss in mass after heating at 900 °C of crude sodium borates for industrial use.

2 PRINCIPLE

Determination of the loss in mass after heating of a test portion in an electric furnace at 900 ± 50 °C.

3 APPARATUS

Ordinary laboratory apparatus and

3.1 Platinum crucible, 35 mm diameter and 40 mm deep, with platinum lid.

3.2 Electric furnace, capable of being maintained at 900 ± 50 °C.

4 PROCEDURE

4.1 Test portion

4.1.1 *Anhydrous salt*

Weigh, to the nearest 0.000 5 g, about 2 g of the test sample directly into the crucible (3.1), previously heated to 900 ± 50 °C in the electric furnace (3.2), allowed to cool in a desiccator and weighed without its lid.

4.1.2 *Hydrated salt*

Weigh, to the nearest 0.000 5 g, about 1 g of the test sample directly into the crucible (3.1), previously heated to 900 ± 50 °C in the electric furnace (3.2), allowed to cool in a desiccator and weighed with its lid.

4.2 Determination

4.2.1 *Anhydrous salt*

Transfer the crucible containing the test portion (4.1.1) to the electric furnace (3.2) and maintain it at 900 ± 50 °C for 15 min. Remove the crucible from the furnace and allow it to cool in a desiccator and weigh it again without its lid.

4.2.2 *Hydrated salt*

Adjust the flame of a Bunsen burner so that it is 5 cm long and clamp the burner in a nearly horizontal position with the flame angled slightly downwards. Cover the crucible containing the test portion (4.1.2) and place it so that the Bunsen flame plays on its lid and heat it in this manner for 20 min. Then use the burner to heat the crucible in the normal manner from below, for a further 10 min. Transfer the covered crucible to the electric furnace (3.2) and maintain it at 900 ± 50 °C for 15 min. Remove the crucible from the furnace, allow it to cool in a desiccator and weigh it again with its lid.

5 EXPRESSION OF RESULTS

The loss in mass after heating at 900 °C is given, as a percentage by mass, by the formula :

$$\frac{m_0 - m_1}{m_0} \times 100$$

where

m_0 is the mass, in grams, of the test portion;

m_1 is the mass, in grams, of the test portion after heating.

6 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.