INTERNATIONAL STANDARD 3426

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Sulphur for industrial use — Determination of loss in mass at 80 °C

Soufre à usage industriel — Détermination de la perte de masse à 80 °C

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up has the right to be represented on that Committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

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 3426 was drawn up by Technical Committee ISO/TC 47, *Chemistry,* and circulated to the Member Bodies in February 1974.

It has been approved by the Member Bodies of the following countries :

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

No Member Body expressed disapproval of the document.

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Sulphur for industrial use – Determination of loss in mass at 80 °C

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method for the determination of the loss in mass at 80 °C of sulphur for industrial use.

2 PRINCIPLE

Heating of a test portion in an oven at 80 °C and determination, by weighing, of the resulting loss in mass.

3 APPARATUS

Ordinary laboratory apparatus and

3.1 Weighing bottle, about 75 mm diameter and about 30 mm high, equipped with a lid.

3.2 Electric oven, capable of being controlled at 80 ± 2 °C.

4 SAMPLING

Follow the procedure specified in ISO . . .[1)]

The laboratory sample shall have a particle size less than 6 mm.

5 PROCEDURE

5.1 Test portion

Dry the weighing bottle (3.1) and its lid in the oven (3.2), controlled at 80 ± 2 °C, for 2 h, cool in a desiccator and weigh to the nearest 0,001 g. Weigh, to the nearest 0,001 g, 50 g of the laboratory sample into the weighing bottle.

5.2 Determination

Proceed using either of the two following techniques :

– drying for 16 h;

– drying to constant mass but without exceeding a total drying period of 16 h.

In the first case, leave the bottle, its contents, its lid and a watch glass, the diameter of which is slightly larger than that of the weighing bottle, in the oven (3.2), controlled at 80 ± 2 °C, for 16 h. After drying, place the watch glass on the weighing bottle and place all in a desiccator. After cooling, close the weighing bottle with its lid and reweigh to the nearest 0,001 g.

In the second case, leave the bottle, its contents, its lid and a watch glass, the diameter of which is slightly larger than that of the weighing bottle, in the oven (3.2), controlled at 80 ± 2 °C, for about 3 h. After drying, place the watch glass on the weighing bottle and place all in a desiccator. After cooling, close the weighing bottle with its lid and reweigh to the nearest 0,001 g. Repeat the above procedure until the mass remains constant, i.e. until two consecutive weighings do not differ by more than 0,005 g.

If constant mass is not achieved after a total period of 16 h drying by this second procedure, record the result of the final weighing.

6 EXPRESSION OF RESULTS

The loss in mass, expressed as a percentage by mass, is given by the formula

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

where

m_0 is the mass, in grams, of the test portion (5.1) before heating;

m_1 is the loss in mass, in grams, 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.

1) In preparation.

ANNEX

ISO PUBLICATIONS RELATING TO SULPHUR FOR INDUSTRIAL USE

ISO 2866 – Determination of total carbon content – Titrimetric method.

ISO 3425 – Determination of ash content at 850–900 °C and of residue at 200 °C.

ISO 3426 – Determination of loss in mass at 80 °C.

ISO 3704 – Determination of acidity – Titrimetric method.

ISO 3705 – Determination of arsenic content – Silver diethyldithiocarbamate photometric method.