

INTERNATIONAL
STANDARD

ISO
4282

Second edition
1992-12-15

**Acid-grade and ceramic-grade fluorspar —
Determination of loss in mass at 105 °C**

iTeh STANDARD PREVIEW

*Spaths fluor pour la fabrication de l'acide fluorhydrique et spaths fluor
utilisables dans l'industrie céramique — Détermination de la perte de
masse à 105 °C*

ISO 4282:1992

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Reference number
ISO 4282:1992(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 4282 was prepared by Technical Committee ISO/TC 175, *Fluorspar*.

This second edition cancels and replaces the first edition (ISO 4282:1977), which has been updated.

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Acid-grade and ceramic-grade fluorspar — Determination of loss in mass at 105 °C

1 Scope

This International Standard specifies a method for the determination of the loss in mass at 105 °C of acid-grade and ceramic-grade fluorspar.

The method is applicable to acid-grade and ceramic-grade fluorspar, which may be dried material containing not less than 0,02 % (*m/m*) of components volatile at 105 °C, or filter cake.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 8868:1989, *Fluorspar — Sampling and sample preparation*.

3 Principle

Drying of a test portion at 105 °C ± 2 °C and determination of the loss in mass, which corresponds to the content of water and other components volatile at that temperature.

4 Apparatus

Ordinary laboratory apparatus and

4.1 Weighing bottle, of capacity approximately twice the volume of the test portion (6.1.1) and with diameter twice the height.

4.2 Dish, of enamelled metal or glass, height approximately 40 mm and either

— rectangular, about 300 mm × 200 mm,

or

— circular, diameter about 250 mm.

4.3 Electric oven, capable of being maintained at a temperature of 105 °C ± 2 °C.

5 Test sample

Prepare the test sample in accordance with the procedure given in ISO 8868:1989 sub-clause 9.2.

6 Procedure

6.1 Test portion

6.1.1 Dried materials

Weigh, to the nearest 0,01 g, about 100 g of the test sample (see clause 5) into the weighing bottle (4.1), previously dried in the oven (4.3) maintained at 105 °C ± 2 °C, allowed to cool in a desiccator and weighed to the nearest 0,01 g.

6.1.2 Filter cakes

Weigh, to the nearest 0,1 g, about 1 000 g of the test sample (see clause 5) into the dish (4.2), previously dried in the oven (4.3) maintained at 105 °C ± 2 °C, allowed to cool and weighed to the nearest 0,1 g.

Because of the heterogeneous nature of filter cakes, a larger test portion is needed than in the case of dried materials.

6.2 Determination

6.2.1 Dried materials

Dry the test portion (6.1.1) contained in the weighing bottle (4.1), in the oven (4.3), maintained at $105\text{ °C} \pm 2\text{ °C}$ for 2 h. Allow to cool in a desiccator and reweigh to the nearest 0,01 g.

6.2.2 Filter cakes

Dry the test portion (6.1.2) contained in the dish (4.2) for 5 h in the oven (4.3), maintained at $105\text{ °C} \pm 2\text{ °C}$. Allow to cool and reweigh to the nearest 0,1 g.

7 Expression of results

The loss in mass at 105 °C , expressed as a percentage by mass, is given by the formula

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

where

m_0 is the mass, in grams, of the test portion (6.1);

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

8 Test report

The test report shall include the following particulars:

- a) all information necessary for the identification of the sample;
- b) a reference to the method used (reference to this International Standard);
- c) the results and the form in which they have been expressed;
- d) any unusual features noted during the determination;
- e) any operation not included in this International Standard, or in the International Standard to which reference is made, or regarded as optional.

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