INTERNATIONAL STANDARD 1619

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Cryolite, natural and artificial — Preparation and storage of test samples

Cryolithe, naturelle et artificielle — Préparation et conservation des échantillons pour essai

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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.

Prior to 1972, the results of the work of the Technical Committees were published as ISO Recommendations; these documents are now in the process of being transformed into International Standards. As part of this process, Technical Committee ISO/TC 47 has reviewed ISO Recommendation R 1619 and found it technically suitable for transformation. International Standard ISO 1619 therefore replaces ISO Recommendation R 1619-1970.

ISO Recommendation R 1619 was approved by the Member Bodies of the following countries :

Australia	Hungary	Romania
Austria	India	South Africa, Rep. of
Belgium	Iran	Spain
Brazil	Israel	Sweden
Canada	Italy	Switzerland
Czechoslovakia	Netherlands	Turkey
Egypt, Arab Rep. of	New Zealand	United Kingdom
France	Norway	U.S.S.R.
Germany	Poland	Yugoslavia
Greece	Portugal	

No Member Body expressed disapproval of the Recommendation.

No Member Body disapproved the transformation of ISO/R 1619 into an International Standard.

Printed in Switzerland

Cryolite, natural and artificial — Preparation and storage of test samples

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the procedure for the preparation and storage of test samples, i.e. crude samples and dried samples, of natural and artificial cryolite, and of natural and synthetic materials having a molar ratio (NaF/AlF_3) between 3 and 1,7 approximately.

2 REFERENCE

ISO . . ., *Cryolite, natural and artificial — Sampling.*[1)]

3 PREPARATION OF TEST SAMPLES

3.1 Laboratory sample

For the preparation of the laboratory sample, use the method specified in ISO . . .

3.2 Crude sample, for the determination of certain geometric characteristics, for certain physical and physico-chemical tests and for moisture determination.

Take approximately 300 g of the laboratory sample and place it in an airtight container of such a capacity that it is nearly filled by the sample.

3.3 Dried sample, for chemical tests, for the determination of certain geometric characteristics and for physical and physico-chemical tests.

3.3.1 *Principle*

Grinding followed by sieving of the sample until the whole passes through a sieve of mesh aperture 0,125 mm.

Thorough mixing and drying at approximately 110 °C.

3.3.2 *Apparatus*

Ordinary laboratory apparatus and

3.3.2.1 Sieve, of mesh aperture 0,125 mm, made of a material that cannot cause introduction of the impurity to be determined.

The sieve shall be selected in relation to the impurity to be determined.

3.3.2 2 Mortar, of corundum or agate.

3.3.2.3 Electric oven, capable of being controlled at 110 ± 2 °C.

3.3.3 *Procedure*

Sieve approximately 100 g of the laboratory sample using the sieve (3.3.2.1).

Grind the particles remaining in the sieve in the mortar (3.3.2.2) and sieve again. Add these sievings to the material which has previously passed through the sieve and mix carefully.

Repeat the grinding, sieving and mixing operations until all the material is passed through the sieve.

Place the sample thus prepared in a platinum dish and dry for at least 2 h in the oven (3.3.2.3) controlled at 110 ± 2 °C. Remove the dish from the oven and allow to cool in a desiccator.

Keep the dried sample in an airtight container, the capacity of which is such that the sample fills it almost completely.

4 MARKING OF CONTAINERS

The containers shall bear a label indicating :

a) the name of the product;

b) the origin of the product;

c) the nature of the sample (crude or dried);

d) the type of sieve used;

e) the date of preparation.

1) In preparation.

ANNEX

ISO PUBLICATIONS RELATING TO CYROLITE, NATURAL AND ARTIFICIAL

ISO 1619 – Preparation and storage of test samples.

ISO 1620 – Determination of silica content – Reduced molybdosilicate spectrophotometric method.

ISO 1693 – Determination of fluorine content – Modified Willard-Winter method.

ISO 1694 – Determination of iron content – 1,10-Phenanthroline photometric method.

ISO 2366 – Determination of sodium content – Flame emission and atomic absorption spectrophotometric methods.

ISO 2367 – Determination of aluminium content – 8-Hydroxyquinoline gravimetric method.

ISO 2830 – Determination of aluminium content – Atomic absorption method.

ISO 3391 – Determination of calcium content – Flame atomic absorption method.

ISO 3392 – Determination of water content – Electrometric method.

ISO 3393 – Determination of moisture content – Gravimetric method.

ISO 4277 – Evaluation of free fluorides content – Conventional titrimetric method.

ISO 4280 – Determination of sulphates content – Barium sulphate gravimetric method.

ISO . . . – Sampling.