SLOVENSKI STANDARD
SIST ISO 7764:2000

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Železove rude - Priprava predhodno osušenega preskusnega vzorca za kemijsko analizo

Iron ores -- Preparation of predried test samples for chemical analysis

Minerais de fer -- Préparation des échantillons présséchés pour analyse chimique

Ta slovenski standard je istoveten z: **ISO 7764:1985**

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73.060.10	Železove rude	Iron ores

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International Standard 7764

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Iron ores — Preparation of predried test samples for chemical analysis

Minerais de fer — Préparation des échantillons préséchés pour analyse chimique

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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.

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. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 7764 was prepared by Technical Committee ISO/TC 102, *Iron ores.*

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Iron ores — Preparation of predried test samples for chemical analysis

1 Scope and field of application

This International Standard specifies a method for the preparation of predried test samples of natural iron ores, and iron ore concentrates and agglomerates, including sinter products, which are to be used for the determination of analytical values of constituents on a dry basis.

The method is not applicable, and ISO 2596 shall be used, when the analytical value of the constituent being determined is higher than 10 % (m/m) in the following types of ores :

a) processed ore containing metallic iron (direct reduced iron);

b) natural or processed ores in which the sulfur content is higher than 0,2 % (m/m);

c) natural or processed ores in which the content of combined water is higher than 2,5 % (m/m).

2 References

ISO 2596, *Iron ores — Determination of hygroscopic moisture in analytical samples — Gravimetric and Karl Fischer methods.*

ISO 3081, *Iron ores — Increment sampling — Manual method.*[1)]

ISO 3082, *Iron ores — Increment sampling and sample preparation — Mechanical method.*[2)]

ISO 3083, *Iron ores — Preparation of samples — Manual method.*[3)]

3 Principle

Drying of a test sample to constant mass at 105 °C .

4 Apparatus

Usual laboratory equipment and

Weighing bottle, having a diameter, in general, not less than 50 mm. However, a smaller bottle may be used on condition that the size of the bottle shall be such that the mass, in milligrams, of the test sample is less than five times the area of the bottom of the bottle expressed in square millimetres.

5 Sampling and samples

A laboratory sample with a particle size of minus 100 µm which has been taken in accordance with ISO 3081 or ISO 3082 and prepared in accordance with ISO 3082 or ISO 3083 shall be used.

NOTE — A laboratory sample with a particle size of minus 160 µm may also be used for predrying, except for the case when the element being determined is of a higher content than 10 % (m/m).

The sample shall be thoroughly mixed immediately before use.

6 Procedure

Dry a weighing bottle (clause 4) and a well-fitting stopper at a temperature of 105 ± 2 °C and cool in a desiccator. Take from the thoroughly mixed laboratory sample a test sample of not more than 10 g and transfer to the dried weighing bottle (see note 1). Spread the test sample evenly in the weighing bottle.

Dry the open weighing bottle with the test sample and the stopper in a laboratory oven for 2 h at 105 ± 2 °C. Close the weighing bottle with the stopper, transfer to a desiccator and cool to room temperature (20 to 30 min). Slightly remove the stopper and quickly replace it again, then weigh the stoppered bottle and contents. Repeat the drying and weighing operations for 25 min periods until constant mass is obtained (see notes 2, 3 and 4). (The test sample dried to constant mass is the predried test sample.)

Preserve the predried test sample in the stoppered weighing bottle in a desiccator. Take and weigh the test portion quickly in order to avoid reabsorption of moisture (see note 5).

1) At present at the stage of draft. (Revision of ISO 3081-1973.)

2) At present at the stage of draft.

3) At present at the stage of draft. (Revision of ISO 3083-1973.)

NOTES

1 The test sample should be taken in multiple increments in such a way that it is representative of the whole contents of the container.

2 Constant mass is obtained when the difference in mass between subsequent determinations becomes 0,05 % or less of the initial mass of the test sample.

3 If the drying period required to obtain constant mass has been determined previously for a test sample, the sample may be dried for the predetermined period without any repeated drying.

4 If the sample increases in mass after repeated drying by not more than 0,02 %, accept the mass as constant. If a greater increase has occurred, reject the sample and determine the hygroscopic moisture content of an equilibrated sample using the procedure in ISO 2596.

5 If the analytical value being determined is above 10 % (m/m) in ores for which predrying is applicable (see clause 1), take and weigh the test portion on the day of predrying.