

# INTERNATIONAL STANDARD

**ISO**  
**10226**

First edition  
1991-09-15

---

---

## **Aluminium ores — Experimental methods for checking the bias of sampling**

*Minerais alumineux — Méthodes expérimentales de contrôle de l'erreur  
systématique d'échantillonnage*



Reference number  
ISO 10226:1991(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 10226 was prepared by Technical Committee ISO/TC 129, *Aluminium ores*, Sub-Committee SC 1, *Sampling*.

This document is a preview generated by EVS

# Aluminium ores — Experimental methods for checking the bias of sampling

## 1 Scope

This International Standard specifies experimental methods for checking the bias of sampling of aluminium ores, when the sampling is carried out in accordance with the procedures specified in ISO 8685.

NOTE 1 These methods may also be applied for checking the bias of sample preparation, when the sample preparation is carried out in accordance with the specifications of ISO 6140.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were 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 editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 6140:—<sup>1)</sup>, *Aluminium ores — Preparation of samples*.

ISO 8685:—<sup>1)</sup>, *Aluminium ores — Sampling procedures*.

## 3 General

**3.1** In the experimental methods given in this International Standard, the results obtained from the method to be checked (referred to as "Method B") are compared with the results of a reference method (referred to as "Method A") which is considered to

produce practically unbiased results, from technical and empirical viewpoints.

In the event that there is no significant difference in a statistical sense between the results obtained from Method B and those obtained by Method A, Method B may be adopted as a routine method.

NOTE 2 In this International Standard, bias is assessed by application of the *t*-test (one-sided) at the 5 % significance level, by determining whether the difference between the results of Method A and of Method B are due to random chance variations or to whether the results are statistically different.

The number of paired sets of measurements shall not be less than 20. The number of data sets required depends on the standard deviation of the differences based on 20 data sets and the value of the bias  $\delta$ , to be detected as specified in clause 5.

Any chemical or physical quality may be used. The most commonly used characteristics are alumina, silica and moisture content. Bias may not always be determined for just one parameter, therefore several parameters, preferably those which would subsequently be of interest, should be determined to ensure that there is no bias. Characteristics to be tested need to be determined before the experiment begins. When increments for Method A and Method B can be taken from closely adjacent portions of the ore, it is recommended that sample preparation and testing be carried out on each increment individually. A comparison should never be made using combined data for increments, subsamples or gross samples.

The method for analysis of experimental data described in clause 5 may also be applied for checking a possible significant difference in the result obtained from the samples of one lot collected at different places, for example, a loading point and a discharging point.

1) To be published.