INTERNATIONAL STANDARD 567

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Coke — Determination of the bulk density in a small container

Coke — Détermination de la masse volumique en vrac dans un récipient de petites dimensions

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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 27 has reviewed ISO Recommendation R 567 and found it technically suitable for transformation. International Standard ISO 567 therefore replaces ISO Recommendation R 567-1967 to which it is technically identical.

ISO Recommendation R 567 was approved by the Member Bodies of the following countries :

Australia	Egypt, Arab Rep. of	Philippines
Austria	France	Poland
Belgium	Germany	Romania
Brazil	India	South Africa, Rep. of
Canada	Italy	Switzerland
Chile	Japan	Turkey
Colombia	Korea, Rep. of	United Kingdom
Czechoslovakia	Netherlands	U.S.A.
Denmark	New Zealand	U.S.S.R.

No Member Body expressed disapproval of the Recommendation.

No Member Body disapproved the transformation of ISO/R 567 into an International Standard.

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Coke — Determination of the bulk density in a small container

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method of determining the bulk density of coke in a cubical container of 2 hl capacity. It is applicable to coke of up to 150 mm (round aperture) nominal upper size (see note).

NOTE — The nominal upper size is that at which not more than 5 % of the coke is oversize.

2 REFERENCE

ISO 579, *Coke — Determination of total moisture.*

3 PRINCIPLE

A weighed container of known volume is filled with coke in such a way as substantially to prevent breakage. The upper surface of the coke is levelled and the increase in mass is determined.

4 APPARATUS

4.1 Container, a cubical container of 2 hl (0,200 m^3) capacity, of internal dimension 585 mm, of rigid construction and smooth inner surface, and fitted with handles.

4.2 Weighing machine, preferably of the platform type, of maximum capacity 300 kg and such that the weighing error does not exceed 0,1 % of the maximum load or 250 g, whichever is the smaller.

5 SAMPLE

The sample shall be representative of the coke and more than sufficient in volume to carry out the determination in duplicate.

6 PROCEDURE

Place the container on the weighing machine and note its mass. Charge the coke slowly into the container; the height of drop shall be as small as possible and in any case should not exceed 250 mm.

Having overfilled the container, slide a straight-edge across the top of the container, removing any piece of coke which obstructs the passage of the straight-edge. Weigh the charged container.

Carry out a duplicate determination by repeating the procedure using a second portion of the sample.

7 EXPRESSION OF RESULTS

The bulk density (Z) of the coke on the dry basis, in tonnes per cubic metre, is given by the formula

$$Z = \frac{m_2 - m_1}{V} \times \frac{100 - M}{100}$$

where

m_1 is the mass, in kilograms, of the empty container;

m_2 is the mass, in kilograms, of the container plus coke;

V is the capacity, in litres, of the container;

M is the total moisture content, as a percentage, of the coke, determined in accordance with ISO 579.

Report the result (the mean of two determinations, see clause 6) to three significant figures.

When reported without qualification, bulk density is understood to be expressed on the dry basis; where the bulk density as sold is required, the factor $(100 - M)/100$ should be omitted from the above calculation and the result reported with the qualification "wet basis", "as sold" or "as received".

8 ACCURACY OF DETERMINATION

Bulk density	Maximum acceptable differences between results	
	Repeatability	Reproducibility
	0,03 t/m^3	(see 8.2)

8.1 Repeatability

The results of duplicate determinations, carried out in the same laboratory by the same operator with the same apparatus on representative portions taken from the same sample, shall not differ by more than the above value.

8.2 Reproducibility

No value for reproducibility can be quoted for determinations carried out in different laboratories since the transport of coke samples involves the risk of breakage and thus alteration of the size distribution and the bulk density.

9 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.