

ISO

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 925

DETERMINATION OF CARBON DIOXIDE IN COAL
BY THE GRAVIMETRIC METHOD

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BRIEF HISTORY

The ISO Recommendation R 925, *Determination of carbon dioxide in coal by the gravimetric method*, was drawn up by Technical Committee ISO/TC 27, *Solid mineral fuels*, the Secretariat of which is held by the British Standards Institution (BSI).

Work on this question by the Technical Committee led, in 1966, to the adoption of a Draft ISO Recommendation.

In November 1966, this Draft ISO Recommendation (No. 1125) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Australia	India	Spain
Austria	Ireland	South Africa, Rep. of
Belgium	Italy	Sweden
Bulgaria	Japan	Switzerland
Canada	Korea, Rep. of	Turkey
Chile	Netherlands	U.A.R.
Czechoslovakia	New Zealand	United Kingdom
Denmark	Poland	U.S.S.R.
France	Portugal	Yugoslavia
Germany	Romania	

No Member Body opposed the approval of the Draft.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in January 1969, to accept it as an ISO RECOMMENDATION.

DETERMINATION OF CARBON DIOXIDE IN COAL BY THE GRAVIMETRIC METHOD

1. SCOPE

This ISO Recommendation describes the gravimetric method for the determination of carbon dioxide in the mineral carbonates associated with hard coal.

NOTE. – The result obtained will include any carbon dioxide absorbed by the coal.

2. PRINCIPLE OF THE METHOD

The sample of coal is treated with hydrochloric acid which reacts with the carbonates present to liberate carbon dioxide. The carbon dioxide resulting from the decomposition of the carbonate is absorbed and weighed.

3. REAGENTS

All reagents, unless otherwise specified, should be of analytical reagent quality, and water free from carbon dioxide should be used throughout (see Note 1 below).

3.1 *Hydrochloric acid*, approximately 3 N.

3.2 *Copper phosphate*, granular, particle size 0.7 to 1.2 mm.

3.3 *Magnesium perchlorate*, dried, particle size 0.7 to 1.2 mm (see Note 2 below).

3.4 *Soda-asbestos*, particle size 1.2 to 1.7 mm, preferably self-indicating.

NOTES

1. Distilled water may be freed from carbon dioxide by boiling gently for 15 minutes.
2. Regeneration of magnesium perchlorate should not be attempted, owing to the risk of explosion. When exhausted, the magnesium perchlorate should be washed down the sink with a stream of water.