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ISO RECOMMENDATION

R 1594

UREA FOR INDUSTRIAL USE

DETERMINATION OF ASH

GRAVIMETRIC METHOD

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BRIEF HISTORY

The ISO Recommendation R 1594, *Urea for industrial use – Determination of ash – Gravimetric method*, was drawn up by Technical Committee ISO/TC 47, *Chemistry*, the Secretariat of which is held by the Ente Nazionale Italiano di Unificazione (UNI).

Work on this question led to the adoption of Draft ISO Recommendation No. 1594 which was circulated to all the ISO Member Bodies for enquiry in February 1969. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

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

No Member Body opposed the approval of the Draft.

This Draft ISO Recommendation was then submitted by correspondence to the ISO Council which decided to accept it as an ISO RECOMMENDATION.

ISO Recommendation R 1594 July 1970

UREA FOR INDUSTRIAL USE

DETERMINATION OF ASH

GRAVIMETRIC METHOD

1. SCOPE

This ISO Recommendation describes a gravimetric method for the determination of the ash of urea for industrial use.

2. PRINCIPLE

Ignition of the material at 800 ± 25 °C, to constant mass.

3. APPARATUS

Ordinary laboratory apparatus and

3.1 *Dish,* flat-bottomed, platinum or silica, about 50 mm diameter and 25 mm high.

3.2 *Electric furnace,* controlled at 800 ± 25 °C.

4. PROCEDURE

4.1 Test portion

Weigh, to the nearest 0.1 g, about 100 g of the test sample.

4.2 Determination

Ignite the dish (3.1)* at 800 ± 25 °C, cool in a desiccator and weigh to the nearest 0.1 mg. Heat it over a small flame under a fume hood. Place a little of the test portion (4.1) in the dish and when it has melted, add the remainder of the test portion in small amounts, waiting after each addition until all the sample has melted and partially decomposed.

Transfer the dish containing the partially decomposed material to the furnace (3.2) controlled at about 300 °C, and raise the temperature slowly to 800 ± 25 °C, at such a rate as to avoid loss by spluttering (about 1 hour). Continue heating until the residue is completely ignited (about 30 minutes). Remove the dish from the furnace, cool in a desiccator and weigh. Repeat the ignition in the electric furnace to constant mass.

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* If the ash is less than or equal to 0.001 % (m/m), or if the residue is to be used for the determination of iron, use a platinum dish.