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ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION
R 1741

DEXTROSE

DETERMINATION OF MOISTURE CONTENT

VACUUM OVEN METHOD

1st EDITION

April 1970

For each individual country the only valid standard is the national standard of that country.

Printed in Switzerland

Also issued in French and Russian. Copies to be obtained through the national standards organizations.

BRIEF HISTORY

The ISO Recommendation R 1741, *Dextrose – Determination of moisture content – Vacuum oven method*, was drawn up by Technical Committee ISO/TC 93, *Starch (including derivatives and by-products)*, the Secretariat of which is held by the Deutscher Normenausschuss (DNA).

Work on this question led to the adoption of Draft ISO Recommendation No. 1741 which was circulated to all the ISO Member Bodies for enquiry in November 1968. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Australia	Iran	South Africa, Rep. of
Brazil	Ireland	Spain
Chile	Israel	Thailand
Colombia	Korea, Rep. of	Turkey
France	Netherlands	U.A.R.
Germany	New Zealand	United Kingdom
Greece	Peru	U.S.A.
Hungary	Poland	
India	Romania	

No Member Body opposed the approval of the Draft.

This Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in April 1970, to accept it as an ISO RECOMMENDATION.

ISO Recommendation | R 1741 | April 1970

DEXTROSE

DETERMINATION OF MOISTURE CONTENT

VACUUM OVEN METHOD

1. SCOPE AND FIELD OF APPLICATION

This ISO Recommendation describes a vacuum oven method for the determination of the moisture content of dextrose.

The method is applicable to anhydrous dextrose and dextrose monohydrate.

2. PRINCIPLE

Drying of the test portion in a vacuum drying oven at 100 °C, at a pressure not exceeding 135 mbar *.

3. APPARATUS

3.1 *Weighing dish* (for example about 50 mm in diameter) of metal (unaffected by dextrose under the test conditions) or glass, provided with a closely fitting cover.

3.2 *Electrically heated vacuum drying oven,* with accurate automatic temperature control between 99 and 101 °C, equipped with calibrated thermometer and vacuum gauge.

The drying oven should provide uniform heat distribution and should hold the reduced pressure for several hours after the vacuum pump is turned off. The oven shelves should be so constructed and fitted as to ensure good heat transfer to the weighing dishes.

3.3 *Vacuum pump,* suitable for reducing the pressure in the oven to 135 mbar or less.

3.4 *Drying train,* consisting of a drying tower filled with dried silica gel; the tower is connected in series to a gas scrubber (containing concentrated sulphuric acid), which is connected with the air inlet of the drying oven.

3.5 *Desiccator,* with an effective drying agent, for example concentrated sulphuric acid or freshly activated silica gel with moisture indicator.

3.6 *Analytical balance.*

4. PROCEDURE

4.1 Preparation of sample

Before taking from its container the sample supplied to the laboratory, shake the contents well, or mix them rapidly and thoroughly with a spatula or a spoon.

If the container is too full to permit mixing, the whole sample should be transferred to a larger, thoroughly pre-dried container before mixing.

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* About 100 mmHg.