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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 22428.3-2008

Replacing GB/T 12101-1989

Dextrose -- Determination of loss in mass on drying

葡萄糖干燥失重测定

(English Translation)

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Foreword

This standard is identical with ISO 1741. 1980 "glucose drying process of mass loss was measured vacuum drying method" (in English), which the content and structure of ISO 1741. 1980 is consistent, only made editorial changes.

This standard replaces GB/T 12101-1989 "loss on drying glucose measurement method." this standard and GB/T 12101-1989 compared to major changes are as follows.

- Standard name changed to "loss on drying glucose determination";
- Improve the standard format, according to the International System of Units standardized units;
- Added "6 test report." this standard is proposed and managed by China General Chamber of Commerce.

This standard was drafted. Chinese Chamber of Commerce Business Standard centers, food, Jiangnan University, China Starch Industry Association modified starch professional committee.

1 Scope

This standard specifies the drying process glucose in the mass loss determined by the method of vacuum drying.

This method is suitable for anhydrous glucose and dextrose monohydrate.

Principle 2

The sample was placed in a temperature of 100 °C, the pressure does not exceed the

quality within 13500Pa vacuum oven drying losses.

3 Instrument

3.1

Analytical balance.

3.2

weighing dish. metal (does not occur under the conditions tested chemical reaction) or glass, a diameter of 50mm, with a sealing cap.

3.3

Electric vacuum oven. temperature can be constant at $100\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$, and with a calibrated thermometer, and an absolute pressure gauge.

Inside the oven should be heated uniformly, and the vacuum pump remains closed after a certain vacuum within a few hours, the shelf inside the oven should be conducive to heat Pallet delivery.

3.4

vacuum pump. pressure inside the oven can be reduced to 13500Pa, or less.

3.5

drying system. the drying column filled with dry silica gel and assembled with a concentrated sulfuric acid gas scrubber connected to the composition, and in turn connected to an electric Air inlet of the vacuum oven.

There are plenty of valid within the desiccant and a thick porous plate. 3.6 dryer.

4.1 Sample preparation

The sample in the sample container and mix well. If the container is too small a sample, all samples should be transferred to the appropriate pre-dried container volume Inside, in order to mix.

Prepared dish weighing 4.2 Will open the weighing dish (3.2) and placed in the oven cover (3.3), after $100\text{ }^{\circ}\text{C}$ dried 1h desiccator (3.6), the cooling to room temperature, weighing, accurate to 0.0002g.

4.3 Said sample

Weigh approximately 10g of anhydrous glucose or dextrose monohydrate 5g in weighing dish, cover cap, accurate to 0.0002g.

4.4 Determination

Will be equipped with a sample, cover cap weighing dish placed in the oven (3.3) inside, remove the lid, at $100\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$ drying 4h, pressure does not exceed 13500Pa. During the drying process, through the drying system (3.5) is injected slowly airflow drying oven.

After 4h, vacuum pumps are off (3.4), air dried slowly through the system into the oven until the oven to constant pressure recovery Pressure. Remove the weighing pan cover front cover, placed in a desiccator, cooled to room temperature and weigh to the nearest 0.0002g.

Do not place more than four weighing dish in the dryer.

Parallel experiments should be carried out.

NOTE: If in the course of the experiment or the experiment, the color of raw materials significantly to yellow, the experiment should be repeated at relatively low temperatures, and described in the report.

5 Results Calculation

Mass loss during drying, the mass fraction of said formula shown in Equation (1).

GB/T 22428.3-2008/ISO 1741. 1980