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Glycerols for industrial use — Determination of ash — Gravimetric method

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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.

International Standard ISO 2098 was drawn up by Technical Committee ISO/TC 47, *Chemistry.*

It was approved in March 1971 by the Member Bodies of the following countries:

Austria	India	Thailand
Belgium	Italy	Turkey
Czechoslovakia	Netherlands	United Kingdom
Egypt, Arab Rep. of	New Zealand	U.S.A.
France	Portugal	U.S.S.R.
Germany	South Africa, Rep. of	
Hungary	Switzerland	

No Member Body expressed disapproval of the document.

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Glycerols for industrial use — Determination of ash — Gravimetric method

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a gravimetric method for the determination of the ash of glycerols for industrial use. This method is a conventional one.

2 REFERENCE

ISO 2096, *Glycerols for industrial use — Methods of sampling.*

3 PRINCIPLE

Combustion of the test portion, ignition of the organic matter and weighing of the inorganic residue.

4 APPARATUS

Ordinary laboratory apparatus and

4.1 Platinum dish, 70 to 90 mm diameter and 40 to 50 mm high.

4.2 Muffle furnace, capable of being controlled at 750 ± 10 °C.

5 SAMPLING

Prepare the laboratory sample as described in ISO 2096.

6 PROCEDURE

6.1 Test portion

Heat the dish (4.1) for a few minutes in the furnace (4.2) regulated at 750 ± 10 °C, cool it to room temperature in a desiccator and weigh it to the nearest 0.001 g.

Then weigh into the tared dish, to the nearest 0.01 g, 5 to 100 g of the laboratory sample according to the expected amount of ash (from greater than 1 % to less than 0.01 %).

6.2 Determination

Gently heat the dish (4.1) containing the test portion (6.1), over a small flame until the vapours are ignited. Turn off the heat and allow the glycerol to burn until a carbonaceous mass is obtained. After cooling for 1 to 2 min, place the dish (4.1), for 10 min, in the furnace (4.2) regulated at 750 ± 10 °C.

Cool the dish and contents in a desiccator and then weigh them to the nearest 0.001 g.

7 EXPRESSION OF RESULTS

Ash is given, as a percentage by mass, by the formula :

$$\frac{m_2 - m_1}{m_3 - m_1} \times 100$$

where

m_1 is the mass, in grams, of the empty dish (4.1);

m_2 is the mass, in grams, of the dish containing the ash;

m_3 is the mass, in grams, of the dish containing the test portion.

Express the results to

- three decimal places for ash less than 0.01 %;
- two decimal places for ash between 0.01 and 1 %;
- one decimal place for ash greater than 1 %.

8 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 the ISO document to which reference is made, or regarded as optional.