

Methods of

# Sampling and test for glycerol —

## Part 6: Determination of ash: gravimetric method

[ISO title: Glycerols for industrial use — Determination of ash —  
Gravimetric method]

**NOTE** It is recommended that this Part of BS 5711 be read in conjunction with the general information given in BS 5711-0 “*General introduction*”, issued separately.

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## National foreword

This Part of BS 5711 is identical with ISO 2098 "*Glycerols for industrial use — Determination of ash — Gravimetric method*".

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### Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 and 2, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

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## 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  $750 \pm 10$  °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  $750 \pm 10$  °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  $750 \pm 10$  °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.



## Publications referred to

See Part 0 "*General introduction*".

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