

INTERNATIONAL STANDARD**1615**

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Glycerines for industrial use — Determination of alkalinity or acidity — Titrimetric method

Glycérines à usage industriel — Détermination de l'alcalinité ou de l'acidité — Méthode titrimétrique

First edition — 1976-02-01

UDC 661.188.1 : 543.241

Ref. No. ISO 1615-1976 (E)

Descriptors : polyhydric alcohols, glycerol, chemical analysis, determination of content, alkalinity, acidity, volumetric analysis.

Price based on 2 pages

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.

Prior to 1972, the results of the work of the Technical Committees were published as ISO Recommendations; these documents are now in the process of being transformed into International Standards. As part of this process, Technical Committee ISO/TC 47 has reviewed ISO Recommendation R 1615 and found it technically suitable for transformation. International Standard ISO 1615 therefore replaces ISO Recommendation R 1615-1970 to which it is technically identical.

ISO Recommendation R 1615 was approved by the Member Bodies of the following countries :

Austria	Hungary	Romania
Belgium	India	South Africa, Rep. of
Brazil	Iran	Spain
Colombia	Israel	Sweden
Cuba	Italy	Switzerland
Czechoslovakia	Japan	Thailand
Egypt, Arab Rep. of	Korea, Rep. of	Turkey
France	Netherlands	United Kingdom
Germany	New Zealand	U.S.S.R.
Greece	Portugal	

No Member Body expressed disapproval of the Recommendation.

No Member Body disapproved the transformation of ISO/R 1615 into an International Standard.

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Printed in Switzerland

Glycerines for industrial use – Determination of alkalinity or acidity – Titrimetric method

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a titrimetric method for the determination of the alkalinity or acidity of glycerines for industrial use.

2 REFERENCES

ISO 1614, *Glycerines for industrial use – Samples and test methods – General*.

ISO 2096, *Glycerines for industrial use – Methods of sampling*.

3 PRINCIPLE

Titration of a test portion with a standard volumetric solution of hydrochloric acid or sodium hydroxide in the presence of phenolphthalein as indicator.

4 REAGENTS

During the analysis, use only reagents of recognized analytical reagent grade.

4.1 Water free from carbon dioxide (see ISO 1614).

4.2 Sodium hydroxide, 0,1 N standard volumetric solution.

4.3 Hydrochloric acid, 0,1 N standard volumetric solution.

4.4 Phenolphthalein, 10 g/l ethanolic solution.

Dissolve 1 g of phenolphthalein in 95 % (V/V) ethanol and make up to 100 ml with the same ethanol. Add, drop by drop, approximately 0,02 N sodium hydroxide solution until the first appearance of a pink colour.

5 APPARATUS

Ordinary laboratory apparatus and

5.1 Microburette, graduated in 0,01 ml.

6 PROCEDURE

6.1 Test portion

Weigh, to the nearest 0,001 g, $10 \pm 0,1$ g of the test sample (see ISO 1614).

6.2 Determination

Dilute the test portion (6.1) in about 100 ml of the water (4.1).

Add 3 drops of the phenolphthalein solution (4.4), homogenize and note the colour obtained.

Depending on the particular case, titrate the alkalinity with the standard volumetric hydrochloric acid solution (4.3) until the indicator is decolorized, or titrate the acidity with the standard volumetric sodium hydroxide solution (4.2) until the first persistent pink colour appears.

Use an ordinary burette, or, if the volume of the standard volumetric solution is less than 2 ml, the microburette (5.1).

7 EXPRESSION OF RESULTS

The alkalinity or acidity, expressed conventionally in milliequivalents per 100 g, is given by the formula

$$V \times \frac{1}{10} \times \frac{100}{m} = 10 \frac{V}{m}$$

where

V is the volume, in millilitres, of the standard volumetric solution (4.2) or (4.3), used for the titration;

m is the mass, in grams, of the test portion (6.1).

NOTE – If the concentration of the standard volumetric solution used is not exactly as specified in the list of reagents, an appropriate correction should be made.

8 TEST REPORT

The test report shall include the following particulars :

- the reference of the method used;
- the results and the method of expression used;
- any unusual features noted during the determination;
- all operations not included in this International Standard or the International Standards to which reference is made, or regarded as optional.

ANNEX

ISO PUBLICATIONS RELATING TO GLYCERINES FOR INDUSTRIAL USE

ISO 1614 – Samples and test methods – General.

ISO 1615 – Determination of alkalinity or acidity – Titrimetric method.

ISO 1616 – Determination of sulphated ash – Gravimetric method.

ISO 2096 – Methods of sampling.

ISO 2097 – Determination of water content – Karl Fischer method.

ISO 2098 – Determination of ash – Gravimetric method.

ISO 2099 – Determination of density at 20 °C.

ISO 2464 – Calculation of Matter (Organic) Non-Glycerol (MONG).

ISO 2465 – Determination of arsenic content – Silver diethyldithiocarbamate photometric method.

ISO 2879 – Determination of glycerol content – Titrimetric method.