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Tritolyl phosphate for industrial use — Determination of acidity to phenol red — Volumetric method

Tritolyl phosphate à usage industriel — Détermination de l'acidité au rouge de phénol — Méthode volumétrique

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FOREWORD

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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 2521 was drawn up by Technical Committee ISO/TC 47, *Chemistry*, and circulated to the Member Bodies in September 1971.

It has been approved by the Member Bodies of the following countries :

Austria	Ireland	Spain
Belgium	Israel	Switzerland
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France	New Zealand	United Kingdom
Germany	Poland	U.S.S.R.
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Tritolyl phosphate for industrial use — Determination of acidity to phenol red — Volumetric method

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a volumetric method for the determination of acidity to phenol red of tritolyl phosphate $[(CH_3C_6H_4)_3PO_4]$ for industrial use.

2 PRINCIPLE

Titration of any acidity present in an ethanolic solution with standard volumetric sodium hydroxide solution in the presence of phenol red as indicator.

NOTE — The end point corresponds to the formation of the salt Na_2HPO_4.

3 REAGENTS

Distilled water, or water of equivalent purity, shall be used in the test.

3.1 Ethanol, 95 % (*V/V*).

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

3.3 Phenol red, 0,2 g/l ethanolic solution.

Place 50 mg of phenol red in 2,85 ml of 0,05 N sodium hydroxide solution and 5 ml of 95 % (*V/V*) ethanol, warm until solution is effected and dilute to 250 ml with 20 % (*V/V*) ethanol.

4 APPARATUS

Ordinary laboratory apparatus.

5 PROCEDURE

5.1 Test portion

Weigh, to the nearest 0,5 g, about 100 g of the laboratory sample.

5.2 Determination

Mix the test portion (5.1) with 50 ml of the ethanol (3.1), previously neutralized to the phenol red (3.3). Titrate the mixture with the standard volumetric sodium hydroxide solution (3.2) in the presence of 0,5 ml of the phenol red solution (3.3).

6 EXPRESSION OF RESULTS

Acidity, expressed as a percentage by mass of orthophosphoric acid (H_3PO_4), is given by the formula

$$\frac{0{,}49 \times V}{m}$$

where

V is the volume, in millilitres, of the standard volumetric sodium hydroxide solution (3.2) used for the titration;

m is the mass, in grams, of the test portion.

7 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 regarded as optional.

ANNEX

This document forms part of the following series on methods of test for tritolyl phosphate for industrial use :

ISO 2520 — *List of methods of test.*

ISO 2521 — *Determination of acidity to phenol red — Volumetric method.*

ISO 2522 — *Determination of apparent free phenols content — Volumetric method.*