INTERNATIONAL STANDARD 1264

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

Plastics — PVC resins — Determination of pH of aqueous extract

Matières plastiques — Résines de polychlorure de vinyle — Détermination du pH de l'extrait aqueux

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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.

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 61 has reviewed ISO Recommendation R 1264 and found it technically suitable for transformation. International Standard ISO 1264 therefore replaces ISO Recommendation R 1264-1970 to which it is technically identical.

ISO Recommendation R 1264 was approved by the Member Bodies of the following countries :

Australia	Hungary	Poland
Austria	India	Romania
Belgium	Iran	South Africa, Rep. of
Bulgaria	Israel	Spain
Canada	Italy	Sweden
Czechoslovakia	Japan	Switzerland
Egypt, Arab Rep. of	Korea, Dem.P.Rep. of	Turkey
France	Korea, Rep. of	U.S.A.
Germany	Netherlands	Yugoslavia
Greece	New Zealand	

The Member Body of the following country expressed disapproval of the Recommendation on technical grounds :

United Kingdom

The Member Body of the following country disapproved the transformation of ISO/R 1264 into an International Standard :

Canada

Printed in Switzerland

Plastics — PVC resins — Determination of pH of aqueous extract

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method of measuring the pH of the aqueous extract of a PVC resin.

This determination *is not suitable for estimating the electrical qualities of the resin*, but may be of interest in selecting additives and, especially, stabilizers which are to be used for the preparation of compounds.

2 PRINCIPLE

A given mass of resin is treated with a given volume of an aqueous solution of sodium chloride previously neutralized to pH 7,0 ± 0,2. After stirring and decanting, the pH of the liquid phase of the mixture is determined at a temperature of 20 ± 5 °C, with a pH meter using a glass electrode.

3 REAGENT

Sodium chloride, 1 % solution, neutral or neutralized to pH 7,0 ± 0,2 with 0,01 N acid or alkali solution.

(For the preparation of this aqueous solution use only distilled water.)

4 APPARATUS

4.1 Pipette.

4.2 Beaker, 100 ml.

4.3 Flask, 100 ml, with ground glass stopper.

4.4 Mechanical shaker/stirrer.

4.5 pH meter, with glass electrode, graduated in units of 0,1 pH.

NOTE – Before use, all the glassware should be de-activated by a suitable method, such as the one described in the annex.

5 PROCEDURE

Before all measurements of pH of the aqueous extract, carry out a blank test on the sodium chloride solution (3). This solution can be regarded as correct if the value of the pH, so determined, is between 6,8 and 7,2.

If such is not the case, neutralize the solution again as described above and carry out a fresh confirmation.

If the value of pH is between 6,8 and 7,2, continue the determination as described below :

Introduce into the flask (4.3), previously washed out with the solution of sodium chloride (3) verified as above :

a) 10 ± 0,5 g of resin,

b) 50 ± 2 ml of sodium chloride solution (3).

Stopper the flask and place it on the shaker (4.4). Agitate rapidly for 60 ± 5 min. Allow the flask to stand for 5 to 10 min to allow the resin to settle (below or on the surface of the liquid).

Then, using the pipette (4.1), transfer approximately 30 to 40 ml of the liquid above or below the resin into the beaker (4.2), which has been rinsed beforehand with the sodium chloride solution. (In cases where a large amount of foam has been formed, filtering may be necessary before pipetting.) Measure the pH of the aqueous solution at a temperature of 20 ± 5 °C by means of the pH meter (4.5).

Carry out two determinations. Express the values in pH units to one decimal place. If the difference in duplicate determinations is greater than 0,2 pH units, carry out a new series of determinations until agreement is obtained.

6 EXPRESSION OF RESULTS

Calculate the arithmetic mean of the two values finally retained, rounding to the first decimal place, according to the usual rules.

NOTE – Co-operative tests have shown reproducibility *between different laboratories* on the values of pH thus determined, of ± 0,3.

7 TEST REPORT

The test report shall include the following particulars :

a) reference to this International Standard or to an equivalent national standard;

b) complete identification of the product tested;

c) the result expressed according to clause 6;

d) any circumstances which may have affected the result;

e) date of test.