INTERNATIONAL STANDARD 1393

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

Liquid halogenated hydrocarbons for industrial use — Determination of acidity — Titrimetric method

Hydrocarbures halogénés liquides à usage industriel — Détermination de l'acidité — Méthode titrimétrique

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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 in the process of being transformed into International Standards. As part of this process, Technical Committee ISO/TC 47, *Chemistry,* has reviewed ISO Recommendation R 1393-1970 and found it technically suitable for transformation. International Standard ISO 1393 therefore replaces ISO Recommendation R 1393-1970, to which it is technically identical.

ISO Recommendation R 1393 had been approved by the member bodies of the following countries :

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

No member body had expressed disapproval of the Recommendation.

No member body disapproved the transformation of the Recommendation into an International Standard.

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Liquid halogenated hydrocarbons for industrial use — Determination of acidity — Titrimetric method

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a titrimetric method for the determination of the acidity of liquid halogenated hydrocarbons for industrial use.

The method does not apply when the halogenated hydrocarbon hydrolyses at ambient temperature.

2 REFERENCE

ISO 2209, *Liquid halogenated hydrocarbons for industrial use — Sampling.*

3 PRINCIPLE

Titration of the acidity of the aqueous extract from a test portion, with a standard volumetric sodium hydroxide solution in the presence of bromocresol green as indicator.

4 REAGENTS

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

4.1 Distilled water or water of equivalent purity, neutral to bromocresol green.

Add to distilled water contained in a conical flask fitted with a ground glass stopper, 1 % (*V*/*V*) of the bromocresol green solution (4.3) and neutralize with the sodium hydroxide solution (4.2) until the colour turns to clear blue.

4.2 Sodium hydroxide, 0,01 N standard volumetric solution, standardized against a 0,01 N hydrochloric acid solution under the same conditions as the determination.

4.3 Bromocresol green, 1 g/l solution in 95 % (*V*/*V*) ethanol.

5 APPARATUS

Ordinary laboratory apparatus, and

5.1 Stop-watch.

6 PROCEDURE

6.1 Test portion

Take 50,0 ml of the laboratory sample prepared according to ISO 2209.

6.2 Determination

Place in a 250 ml separating funnel 100,0 ml of the neutral distilled water (4.1) at approximately 20 °C. Add the test portion (6.1) and stir for exactly 3 min, measured with the aid of the stop-watch (5.1). Allow to settle.

If the sample is acid, the aqueous phase will be yellow in colour. Carefully take 50,0 ml of this phase and transfer to a 250 ml conical flask.

Titrate with the standard volumetric sodium hydroxide solution (4.2) until the colour turns to clear blue.

7 EXPRESSION OF RESULTS

The acidity, expressed in milliequivalents per litre, is given by the formula

$$V \times 0{,}01 \times \frac{100}{50} \times \frac{1\,000}{50} = 0{,}4\ V$$

where V is the volume, in millilitres, of the standard volumetric sodium hydroxide solution (4.2) used for the determination.

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.