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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 30925-2014

**Plastics -- Ethylene-vinyl acetate copolymer (EVAC)
thermoplastics -- Determination of vinyl acetate content**

**塑料 乙烯-乙酸乙烯酯共聚物 (EVAC) 热塑性塑料 乙酸乙烯酯含量的测定
(English Translation)**

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3.1 Reference Method 1. Hydrolysis - back titration

Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules.

This standard uses redrafted law revision using ISO 8985:1998 "Plastics ethylene - vinyl acetate copolymer (EVAC) thermoplastics Determination of plastic vinyl acetate ester content. " this standard and ISO 8985:1998 technical differences are as follows.

--- Modify the test range infrared spectroscopy vinyl acetate content by not less than 10% to not less than 3% (see Chapter 1);

--- Increased infrared spectroscopy for ethylene content calculated absorption 720cm⁻¹, 2020cm⁻¹ (see 4.1.1.1);

--- Modified infrared spectroscopy test equipment, infrared spectrometer to Fourier transform infrared spectrometer (see 4.1.2.1);

--- Modified infrared spectroscopy instrument wave number range from 4000cm⁻¹ ~ 600cm⁻¹ to 4000cm⁻¹ ~ 400cm⁻¹ (See 4.1.2.1);

--- Infrared spectroscopy modified test procedure, the test procedure according to a Fourier transform infrared spectrometer operation (see 4.1.3.2);

--- Modified infrared spectroscopy and infrared spectra of the example in Figure absorbance is calculated (see 4.1.3.2.5);

--- Modified infrared spectroscopy calibration curve example (see 4.1.3.3).

The standard proposed by China Petroleum and Chemical Corporation.

This standard by the National Standardization Technical Committee of plastic resins and petrochemical plastics Technical Committee (SAC/TC15/SC1) technology Centralized.

1 Scope

This standard specifies the determination of ethylene - Test methods vinyl acetate content of the vinyl acetate copolymer (EVAC).

This standard specifies test methods, including reference methods and test methods. Wherein the reference method for ethylene - vinyl acetate copolymer Calibration vinyl acetate content of the test method.

After the test methods specified in this standard with the reference method for calibration, such as acceptable reproducibility of test results, you can use the test method Determination of vinyl acetate content.

This standard specifies the test methods in infrared spectroscopy applied to vinyl acetate content of not less than 3% of EVAC samples.

NOTE: ethylene - vinyl acetate copolymer is abbreviated EVAC often use EVA.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 28212-2011 laboratory glassware condenser

3.1.1 Principle

The sample was dissolved in xylene, was added potassium hydroxide - ethanol solution so that the hydrolysis of the acetate group. Then adding excess sulfuric acid or hydrochloric acid, to Phenolphthalein as an indicator, with sodium hydroxide standard solution titrate the excess acid.

3.1.2 Reagents

Analysis using analytical reagent.

3.1.2.1

xylene.

3.1.2.2

sulfuric acid concentration of about 5g/L, or hydrochloric acid, a concentration of about 3.7g/L.

3.1.2.3

KOH - ethanol, a concentration of about 5.6g/L.

The solid was 5.6g of potassium hydroxide was dissolved in 500mL of ethanol, and then diluted to 1000mL. After standing for 24h, supernatant.

3.1.2.4

standard sodium hydroxide solution, $c(\text{NaOH}) = 0.1\text{mol/L}$.

3.1.2.5

phenolphthalein indicator. 0.7g of phenolphthalein was dissolved in 100mL of ethanol.

3.1.3 Instruments

Usual laboratory equipment and the following.

3.1.3.1

Buret capacity 50mL.