

ICS 83.040.10
CCS G 34



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

GB/T 8657-2014

Replacing GB/T 8657-2000

**Rubber, raw styrene-butadiene -- Determination of soap and
organic-acid content**

苯乙烯-丁二烯生橡胶 皂和有机酸含量的测定
(English Translation)

Issued on: July 8, 2014

Implemented on: December 1, 2014

Issued by: Standardization Administration of China

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Foreword

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

This standard replaces GB/T 8657-2000 "Styrene - Butadiene Rubber, raw - Determination of soap and organic acid content." this standard and GB/T 8657-2000 technical differences are as follows.

- Modify the standard name;
- Increased warning;
- Modify the scope (see Chapter 1);
- Remove the pH value is determined using a fixed end point titration method and related content (see the 2000 edition of Chapter 3, Chapter 4, Section 5 Chapter 7.3, Chapter 8, and 9.2);
- Increased by potentiometric titration end point jump determination method and related content (see Chapter 3, Chapter 5, 7.3, Chapter 8, 9.2 and Appendix A);
- Increase in Appendix B (informative) "rosin test trials." this standard uses redrafted law revision using ISO 7781:2008 "Styrene - Butadiene Determination of soap and organic raw rubber content" (In English).

This standard and ISO 7781:2008 technical differences are as follows.

- On normative references, this standard has been adjusted technical differences, in order to adapt our technical conditions, the adjusted situation Focus is reflected in the status of Chapter 2, "Normative references", the specific adjustments are as follows.
- equivalents adoption of international standards GB/T 15340 replaces ISO 1795;
- Remove the ISO 385;
- Remove the ISO 648;

- Remove the ISO 1042;
- Remove the ISO 4799;
- increase the GB/T 601.
- Removed using Soxhlet extractor test solution preparation method.
- Remove the pH value is determined using a fixed end point titration method and related content.
- Increased by potentiometric titration end point jump determination method and related content (see Chapter 3, Chapter 5, 7.3, 8 and the first specification Appendix A).
- Increasing the allowable difference (see Chapter 9).

The standard proposed by China Petroleum and Chemical Corporation.

This standard by the National Standardization Technical Committee rubber and rubber products, synthetic rubber Technical Committee (SAC/TC35/SC6) Centralized.

This standard drafting unit. China Petrochemical Research Institute Co., Ltd. Gas Oil, Shen Hua Chemical Industrial Company Limited.

1 Scope

This standard specifies the determination of styrene - butadiene rubber raw two methods of soap, organic acid. A method for the indicator method, B law Automatic potentiometric titration.

This standard applies to emulsion styrene - butadiene rubber raw. For aromatic extender oil and (or) phenylene diamine antioxidant Styrene - butadiene rubber raw, Method B should be adopted.

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.

Preparation of GB/T 601 chemical reagent standard titration solution GB/T 15340 natural, synthetic rubber raw sampling and sample preparation method (GB/T 15340-2008, ISO 1795:2000, IDT)

3 Method Summary

The sample preparation into strips with a solvent extracted rubber soap and organic acids, soaps and organic acid content is then determined by acid-base titration.

A method using indicator method, titration with standard hydrochloric acid solution was titrated to determine the content of soap, titrated with sodium hydroxide standard titration solution to measure Given organic acid content.

B by potentiometric titration method, it is determined by potentiometric titration equivalence point jump point. Using back titration method, plus excess acid with standard sodium hydroxide Quasi titration solution was titrated to determine the content of soap and organic acids.

4 Reagents

Unless otherwise indicated in the analysis using only the confirmation of analytical grade or higher purity reagents and distilled water or equivalent purity.

4.1 Extractant

4.1.1

ethanol - toluene azeotrope liquid (ETA). 7 parts by volume of ethanol and 3 parts by volume of toluene were mixed.

4.1.2

Ethanol - Toluene - water mixture. 95mL of the ETA (4.1.1) was mixed with 5mL of distilled water.

4.2 hydrochloric acid standard titration solution. $c(\text{HCl}) = 0.05\text{mol/L}$, prepared according to GB/T 601.

4.3 sodium hydroxide standard titration solution. $c(\text{NaOH}) = 0.1\text{mol/L}$, according to GB/T 601 formulation.

4.4 thymol blue indicator. The thymol blue 0.06g dissolved in 6.45mL of 0.02mol/L sodium hydroxide solution (diluted from 4.3 too to) and diluted with distilled water to 50mL.