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

GB/T 39715.3-2021

**Plastics - Biobased content - Part 3: Determination of biobased
synthetic polymer content**

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Table of Contents

Foreword

Introduction

1 Scope

2 Normative references

3 Terms, definitions and symbols

3.1 Terms and definitions

3.2 Symbols

4 Principle

Foreword

GB/T 39715 "Plastic Bio-based Content" is divided into 5 parts.

---Part 1.General principles;

---Part 2.Determination of bio-based carbon content;

---Part 3.Determination of bio-based synthetic polymer content;

---Part 4.Determination of the content of bio-based substances;

---Part 5.Reports on bio-based carbon content, bio-based synthetic polymer content and bio-based material content.

This part is Part 3 of GB/T 39715.

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

The translation method used in this part is equivalent to ISO 16620-3:2015 "Plastic Bio-based Content Part 3.Bio-based Synthetic Polymers

Determination of content.

The Chinese documents that have a consistent correspondence with the international documents cited in this section are as follows.

---GB/T 39715.1-2021 Plastic Bio-based Content Part 1.General Principles (ISO 16620-1:2015, IDT)

---GB/T 39715.2-2021 Bio-based content of plastics Part 2.Determination of bio-based carbon content (ISO 16620-2.

2015, IDT)

This part was proposed by the China Petroleum and Chemical Industry Federation.

This part is under the jurisdiction of the National Plastics Standardization Technical Committee (SAC/TC15).

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Introduction

Increasing the use of biomass resources in the manufacture of plastic products can effectively reduce global warming and the consumption of fossil resources.

Current plastic products consist of bio-based synthetic polymers, fossil-based synthetic polymers, natural polymers and additives (may include biological substrates)

?) Composition.

Bio-based plastics refer to plastics that contain all or part of materials of biological origin.

In this series of standards, the bio-based content of bio-based plastics only refers to the content of bio-based carbon, the content of bio-based synthetic polymers, or the content of bio-based synthetic polymers.

The content of bio-based substances.

Plastic bio-based content

Part 3.Determination of the content of bio-based synthetic polymers

Warning---The use of this section may involve hazardous materials, operations and equipment. This section is not intended to address all issues related to its use

Security Question. Users who use this part are responsible for establishing appropriate safety and health practices, and determining the appropriateness of regulatory restrictions before use.

Usability.

1 Scope

This part of GB/T 39715 specifies the determination method for the bio-based content of bio-based synthetic polymers in plastic products. The student

The calculation method of the content of the material-based synthetic polymer is based on the quality of the bio-based synthetic polymer in the plastic product.

This section applies to plastic products, plastic materials, polymer resins, monomers or additives made from bio-based and/or fossil-based ingredients.

Knowing the bio-based content of plastic products helps to assess their environmental impact.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article

Pieces. For undated reference documents, the latest version (including all amendments) is applicable to this document.

ISO 16620-1 Plastic Biobased Content Part 1.General Principles
(Plastics-Biobasedcontent-Part 1.General principles)

ISO 16620-2 Plastic Biobased Content Part 2.Determination of Biobased Carbon Content
(Plastics-Biobasedcontent-Part 2.Determinationofbiobasedcarboncontent)

3.1 Terms and definitions

The terms and definitions defined in ISO 16620-1 apply to this document.

3.2 Symbols

The ISO 16620-1 and the following symbols apply to this document.

W_n . The quality of the n component in the product.

$m_{BSP,n}$. The bio-based synthetic polymer content of the n component in the product.

$x_{B,n}$. The bio-based carbon content of the n component in the product.

4 Principle

Biomass labeling used in plastic products is a feasible method to evaluate the development effectiveness of partially or completely bio-based synthetic polymers. Other

It also helps consumers understand and compare their relative contributions to environmental protection.

This section provides methods for measuring the content of bio-based synthetic polymers

derived from biomass resources.

The content of bio-based synthetic polymers in plastic products can be based on the composition of the plastic (as described in the list of component mass fractions), and the corresponding

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