

ICS 67.250
CCS X 08

SN

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

SN/T 3048-2011

**Food contact materials for export. Polymers. Determination of
the degree of 1, 4-diphenyl-1, 3-butadiene (DPBD) transfer. High
performance liquid chromatography**

出口食品接触材料 高分子材料 1, 4-二苯基-1, 3-丁二烯(DPBD)迁移水平
(English Translation)

Issued on: September 9, 2011

Implemented on: April 1, 2012

Issued by: General Administration of Customs

Table of Contents

Foreword
1 Scope
2 Normative references
4 Reagents and materials

Foreword

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

This standard uses redrafted law revision adopts the European standard BSEN14481:2003 "food contact materials and articles plastic grease Experimental methods of measuring the contacting conditions "(in English).

For ease of use, this standard the following modifications.

--- In order to be consistent with the existing series of standards and standard name change;

--- Use the "standard" instead of "this part of the standard";

--- Deleted BSEN14481. 03 references section;

--- By deleting the European standards foreword, and wherein the content of the standards-related arrangements in this section;

--- Removed BSEN14481. 03 of 7.2;

--- Removed BSEN14481. 03 of 7.3;

--- Removed BSEN14481. 03 Chapter 8;

--- Removed BSEN14481. Appendix A 03's;

--- Removed BSEN14481. 03 Annex ZA.

Please note that some of the content of this document may involve patents. Release mechanism of the present document does not assume responsibility for the identification of these patents.

This standard is proposed and managed by the National Certification and Accreditation Administration Committee.

This standard was drafted. People's Republic of China Shandong CIQ.

1 Scope

This standard specifies the method for determination of polymer material or article Food and 1,4-diphenyl-1,3-butadiene (DPBD) migration levels.

This standard applies to food with the polymer material or article measuring 1,4-diphenyl-1,3-butadiene (DPBD) in migration levels.

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.

Laboratory use specifications and test methods GB/T 6682 Analysis GB/T 23296.1 plastic food contact materials in plastics restricted substances test substance specific migration into foods and food simulants Experience and determination method and conditions of exposure to food simulants Guide selection Principle 3 Through the food containing fat-soluble fluorescent dye (1,4-diphenyl-1,3-butadiene, DPBD) contacting the polymer material or article is exposed Experiment by extraction with a fluorescence detector with high performance liquid chromatography. Internal standard to calculate DPBD migration levels.

DPBD migration levels and the degree of exposure to oil. Migration levels can be used to determine whether to use simulant D (refined olive Oil or substitutes) for subsequent experiments polymer material or article.

4 Reagents and materials

Unless otherwise indicated, the reagents used were of analytical grade, water as a secondary water GB/T 6682 stipulated.

4.1

low-density polyethylene film containing $17.3\mu\text{g}/\text{dm}^2 \pm 0.9\mu\text{g}/\text{dm}^2$ 1,4-diphenyl-1,3-butadiene, a fluorescent dye, a width of 20cm volume. As reference material BCR.593. plastic film E, thickness of $149.7\mu\text{m} \pm 0.7\mu\text{m}$ contains $12.58\text{mg}/\text{kg} \pm 0.63\text{mg}/\text{kg}$ 1,4 Diphenyl-1,3-butadiene (DPBD). DPBD light sensitive film, reference material and standard solutions should be stored.

4.2 1,4-diphenyl-1,3-butadiene (DPBD). purity $\geq 98\%$.

4.3 1,6-diphenyl-1,3,5-hexatriene (DPHT). purity $\geq 98\%$. DPHT light sensitive film, reference material and standard solutions to be stored.

4.4

hexane. chromatographically pure.

4.5

dichloromethane. chromatography.

4.6

n-hexane - methylene chloride solution (955, volume ratio).

4.7 1mg/mLDPBD standard stock solution preparation. Accurately weigh $0.050\text{g} \pm 0.001\text{g}$ DPBD (4.2) in 50mL volumetric flask,