

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

SN/T 2895-2011

**Food contact materials for export. Polymers. Determination of
vinylidene chloride in food simulants. Headspace gas
chromatography**

出口食品接触材料 高分子材料 食品模拟物中偏二氯乙烯的测定 顶空气相色谱法
(English Translation)

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Foreword

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

This standard is identical with European standard EN13130-5:2004 "products and materials in contact with food - Part 5 of restricted substances in plastics Score. chloride determination "(in English) in food simulants side.

In order to meet China's national conditions and ease of use, the use of this standard in EN13130-5:2004 time made the following editorial changes, the main difference as follows.

- a) Remove the EN13130-5:2004 in the previous page, directory, foreword, introduction, references and after page;
- b) In the "standard" instead of EN13130-5. in 2004, "This part of this standard";
- c) reference documents EN13130-1:2004 is equivalent to using the national standard GB/T23296.1-2009; included in Chapter 2 References ISO 5725-1:1994 and ISO 5725-2:1994;
- d) increase "Using external standard method" in the "principle of the method" in;
- e) Chapter IV agent and arrange the order of representation according to standard methods of chemical analysis of the preparation required to be altered;
- f) To make the test procedure described in more rational, and in accordance with the requirements of the standard to write, the original note 2 related to Article 5.2 chromatographic conditions Content moved to Chapter 7, "GC Analysis", as 7.2.1 "chromatographic conditions" in Note 1; original 8.2 "precision" to Article 9 Chapter; original 8.2.3 "detection limit" to Chapter 10; accordingly, the original Chapter 9, "conclusive evidence" to Chapter 11; former Chapter 10, "Testing Report "to Chapter 12; corresponding changes in the provisions of the chapters numbers;
- g) "G) instead of a number with a decimal point as a decimal comma ",";
- h) "ml" changed to "mL" representation;

i) in accordance with the provisions of the note prepared by our national standard requirements for adjustment;

j) for the convenience of a standard user, the increase in the chromatographic conditions 7.2.1 "Note 2"; increase the informative Appendix B "headspace analysis conditions" and Information Appendix D "polyvinylidene chloride and 1-chloro propane gas chromatogram"; EN13130-5:2004 Annex B to Appendix C.

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

This standard was drafted. People's Republic of China Ningbo Exit Inspection and Quarantine.

1 Scope

This standard specifies the food simulants vinylidene chloride (VDC) of headspace gas chromatographic method.

This standard applies to the determination of migration in food simulants vinylidene chloride (VDC) polymer materials in contact with food.

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 23296.1-2009 plastic food contact materials restricted substances in food and food simulants to specific substances in plastics Migration testing and determination of methods and conditions of exposure to food simulants Guide selection ISO 5725-1:1994 Measurement methods and results Accuracy (trueness and precision) Part 1 General principles and definitions [Accuracy (trueness and precision) Part 1. General principles and definitions] ISO 5725-2. (trueness and precision) Section 2 1994 accuracy of measurement methods and results to determine the standard measurement method Repeatability and reproducibility of the basic method of [Accuracy (trueness and precision) or measurement methods and results-Part 2. Basic method for the determination of repeatability and reproducibility of a standard measurement method]

3 PRINCIPLE OF THE METHOD

Use with autosampler and electron capture or flame ionization detector headspace gas chromatograph food simulants VDC content. Or using an external standard method with 1-chloro-propane (1-CP) as an internal standard added VDC as a calibrator in mimetic

blank samples, quantitative Determination. If you can not get mimetic blank, use Appendix A of the standard addition method.

If the internal standard is disturbed, the external standard method for calibration. If using electron capture, should use external standard.

If you can not perform automatic headspace sampler, described in Appendix B of the manual is injected into the sample application.

VDC content can be confirmed using gas chromatography/mass spectrometry (GC/MS) method or use a different polarity GC column analysis again.

4 Reagents and materials

4.1

N, N- dimethylacetamide (DMA), a purity of greater than 99%.

4.2

vinylidene chloride (VDC), $\text{H}_2\text{C} = \text{CCl}_2$, purity greater than 99%.

4.3

chloropropane 1- (1-CP), $\text{CH}_3(\text{CH}_2)_2\text{Cl}$, a purity of greater than 98%.

4.4

VDC stock solution of about 2.5g/kg.

Add 20mLDMA (4.1) in -20mL covered flasks or vials, capped and weighed to the nearest 0.1mg. In DMA