

BUREAU OF INDIAN STANDARDS

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भारतीय मानक मसौदा

जूते एवं जूते सामग्री में संभवतः मौजूद हानिकारक पदार्थ

भाग 2 विलायक निष्कर्षण के बिना थैलेट्स के निर्धारण

(IS 16915(Part 2) का पहला पुनरीक्षण)

Draft Indian Standard

**Footwear — Critical Substances Potentially Present in Footwear and
Footwear Components**

Part 2 Determination of phthalate without solvent extraction

(First Revision of IS 16915(Part 2))

(ICS 61.060)

Footwear Sectional Committee, CHD 19

Last Date for Comments: 21-07-2024

Footwear Sectional Committee, CHD 19

NATIONAL FOREWORD

(Formal clause will be added later)

Phthalates are commonly used as plasticizers in polymers. Phthalates are controversial because high doses of many phthalates have shown hormonal activity in rodent studies. Studies on rodents involving large amounts of phthalates have shown damage to the liver, the kidneys, the lungs, and the developing testes. Hence, its use is prohibited in footwear and this standard prescribes a test method for determining the presence of phthalate compounds in footwear materials.

This standard was originally published in 2018 as an identical adoption of ISO 16181: 2011 under dual numbering. ISO 16181: 2011 was bifurcated into two parts i.e. ISO 16181 (Part 1) 'Determination of Phthalates with solvent extraction' and ISO 16181 (Part 2) 'Determination of Phthalates without solvent extraction' in 2021. Hence, the Committee decided to undertake the revision of IS 16915 by adopting ISO 16181 (Part 1) as IS 16915 (Part 1) and ISO 16181 (Part 2) as IS 16915 (Part 2). This Part 2 specifies a method for the determination of the content

of specific phthalates (see Annex A) by pyrolyzer/thermal desorption gas chromatography-mass spectrometry (Py/TD-GC-MS). This document is applicable to all types of footwear materials except textiles.

In this revision following modifications have been done:

- a) phthalates were added to the list in Table A.1 (from 7 onwards);
- b) This document introduces a new technique.

The text of ISO Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are however not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'.
- b) Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards, which are to be substituted in their places, are listed below along with their degree of equivalence for the editions indicated:

<i>International Standard</i>	<i>Corresponding Indian Standard / Document No.</i>	<i>Degree of Equivalence</i>
<i>ISO 16181-1 — Footwear — Critical substances potentially present in footwear and footwear components — Part 1: Determination of phthalate with solvent extraction</i>	CHD/19/25577 — Critical substances potentially present in footwear and footwear components Part 1 — Determination of phthalate with solvent extraction (<i>first revision</i>)	Identical with ISO 16181-1: 2021

In this adopted standard, reference appears to certain International Standards where the standard atmospheric conditions to be observed are stipulated which are not applicable to tropical/subtropical countries. The applicable standard atmospheric conditions for Indian conditions are (27 ± 2) °C and (65 ± 5) percent, relative humidity and shall be observed while using this standard.

In reporting the result of a test or analysis made in accordance with this standard, if the final value, observed or calculated, is to be rounded off, it shall be done in accordance with IS 2 : 2022 'Rules for rounding off numerical values (*second revision*)'.

FOR COMPLETE TEXT OF THE DOCUMENT, KINDLY REFER ISO 16181 -2: 2021

Note: The technical content of the document has not been enclosed as these are identical with the corresponding ISO Standard. For obtaining the copy of the complete ISO Standard, please contact:

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