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English version

Determination of trace chemicals extracted from absorbent hygiene products (AHPs) using simulated urine/menstrual fluid

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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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Foreword

This CEN Workshop Agreement (CWA 18062:2023) has been developed in accordance with the CEN-CENELEC Guide 29 “CEN/CENELEC Workshop Agreements – A rapid prototyping to standardization” and with the relevant provisions of CEN/CENELEC Internal Regulations - Part 2. It was approved by a Workshop of representatives of interested parties on 2023-11-22, the constitution of which was supported by CEN following the public call for participation made on 2023-01-19. However, this CEN Workshop Agreement does not necessarily include all relevant stakeholders.

The final text of this CEN Workshop Agreement was provided to CEN for publication on 2023-11-29.

The following organizations and individuals developed and approved this CEN Workshop Agreement:

- ARPA PIEMONTE (Manuela Agnello, Marco Fontana)
- EDANA (Luminita Barbu, Marines Lagemaat, Marta Roche Diez)
- EUROFINS ATS (Peter Soldani Guillaume)
- European Commission (Marie Gerardy, Marta Thinnes Enguidanos)
- GALAB Laboratories GmbH (Eckard Jantzen, Carsten Saal)
- The LYCRA Company (Ingo Ganz)
- OFI Österreichisches Forschungsinstitut für Chemie und Technik (Elisabeth Mertl)
- Procter & Gamble (David Oertel, Thomas Walenzyk)
- SGS FRANCE (Audrey Guibet, Cédric Schoorens)
- Swedish Institute for Standards (SIS)

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Introduction

There are numerous examples of analytical methods where single-use absorbent hygiene products (AHPs) have been extracted with organic solvents to assess the level of trace chemicals in products for consumer usage. However, organic solvents do not reflect the actual product use, where the relevant biological fluids in contact with AHPs are exclusively water based. EDANA has developed a new standard procedure to assess the levels of trace chemicals in AHPs with the aim of producing a method that is easy to handle for laboratories, validated (repeatable and reproducible) and which reflects consumer relevant aspects.

Safety information

This document does not claim to address all of the safety concerns, if any, associated with the use of this method. It is the responsibility of the user of this document to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use. It is expected that the person performing this test has been fully trained in all aspects of this procedure.

This procedure uses equipment that creates a high noise level and ear protection may be required.

During the milling process superabsorbent polymer dust can be released (if present) from the AHPs and respiratory protection (dust masks) can be required.

1 Scope

This document specifies a method to identify and quantify trace chemicals potentially present in single-use absorbent hygiene products (AHPs). It is applicable for the investigation of single-use baby diapers, single-use menstrual products and single-use adult incontinence products. The results of this method are dependent on the prescribed extraction conditions, in which simulated body fluids are used exclusively. Table 1 shows the various product categories in scope.

Table 1 — Product categories in scope

Baby diapers	Menstrual products	Adult incontinence products ^a
Diapers (all-in- ones)	Menstrual pads	Pads (inserts)
Pants (pull-on training pants)	Panty liners	All-in-ones
	Tampons	Pants (pull-ups)
		Belted products
NOTE Products that absorb excreta designed for non-infant children and teenagers are in scope as well.		
^a For a list of product types and their names see EN ISO 22748		

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN ISO 187, *Paper, board and pulps — Standard atmosphere for conditioning and testing and procedure for monitoring the atmosphere and conditioning of sample*

EN ISO 3696, *Water for analytical laboratory use — Specification and test methods*

EN ISO 22748, *Absorbent incontinence products for urine and/or faeces — Terminology and classification*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp/>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

absorbent hygiene product

AHP

consumer product designed to absorb body fluids and excreta

3.2

product

absorbent hygiene product in a retail packaging