



**Annex to the Partial Accreditation Certificate D-PL-21471-01-03**

Tests in the fields:

**Physical, physical-chemical, chemical, visual and sensory tests of textiles and leather in Textile and clothing industry**

**The testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, the following:**

- 1) the free choice of standard methods or equivalent methods**
- 2) the modification, refinement and development of test methods**

**The listed testing methods are exemplary.**

**The testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, to use standards or equivalent testing methods listed here with different issue dates. In-house procedures are generally excluded from this.**

**The testing laboratory maintains a current list of all testing methods within the flexible scope of accreditation.**

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**1 Physical, physical-chemical and chemical tests of products textiles and leather in Textile and Clothing industry**

**1.1 Clean-up of leather**

DIN EN ISO 4684 2006-02	Leather - Chemical tests - Determination of volatile matter (ISO 4684:2005)
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**1.2 Quantitative determination of fibre mixtures from textile by gravimetry <sup>1)</sup>**

AATCC TM 20A 2021	Test Method for Fiber Analysis: Quantitative
DIN EN ISO 1833-1 2020-09	Textiles - Quantitative chemical analysis - Part 1: General principles of testing (ISO 1833-1:2020)
DIN EN ISO 1833-2 2020-09	Textiles - Quantitative chemical analysis - Part 2: Ternary fibre mixtures (ISO 1833-2:2020)
DIN EN ISO 1833-3 2021-03	Textiles - Quantitative chemical analysis - Part 3: Mixtures of acetate with certain other fibres (method using acetone) (ISO 1833-3:2020)
DIN EN ISO 1833-4 2017-12	Textiles - Quantitative chemical analysis - Part 4: Mixtures of certain protein fibres with certain other fibres (method using hypochlorite) (ISO 1833-4:2017)
DIN EN ISO 1833-6 2019-07	Textiles - Quantitative chemical analysis - Part 6: Mixtures of viscose, certain types of cupro, modal or lyocell with certain other fibres (method using formic acid and zinc chloride) (ISO 1833-6:2018)
DIN EN ISO 1833-7 2017-12	Textiles - Quantitative chemical analysis - Part 7: Mixtures of polyamide with certain other fibres (method using formic acid) (ISO 1833-7:2017)
DIN EN ISO 1833-11 2017-12	Textiles - Quantitative chemical analysis - Part 11: Mixtures of certain cellulose fibres with certain other fibres (method using sulfuric acid) (ISO 1833-11:2017)
DIN EN ISO 1833-12 2021-03	Textiles - Quantitative chemical analysis - Part 12: Mixtures of acrylic, certain modacrylics, certain chlorofibres, certain elastane fibres with certain other fibres (method using dimethylformamide) (ISO 1833-12:2020)

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DIN EN ISO 1833-16 2019-10	Textiles - Quantitative chemical analysis - Part 16: Mixtures of polypropylene fibres with certain other fibres (method using xylene) (ISO 1833-16:2019)
DIN EN ISO 1833-18 2021-03	Textiles - Quantitative chemical analysis - Part 18: Mixtures of silk with wool or other animal hair (method using sulfuric acid) (ISO 1833-18:2020)
DIN EN ISO 1833-22 2021-10	Textiles - Quantitative chemical analysis - Part 22: Mixtures of viscose or certain types of cupro or modal or lyocell with flax fibres (method using formic acid and zinc chloride) (ISO 1833-22:2020)
DIN 54204 1975-08	Testing of textiles; quantitative determination of the proportions of binary blends, wool with other fibres, potassium hydroxide method
DIN 54209 1975-08	Testing of textiles; quantitative analysis of binary mixtures, degummed mulberry silk with wool, formic acid/zinc chloride method
DIN 54221 1975-08	Testing of textiles; quantitative analysis of binary mixtures, polyamide 6 6 or polyamide 6 fibres with other fibres, hydrochloric acid method

**1.3 Determination of the metal content in textiles and leather using inductively coupled plasma mass spectroscopy (ICP-MS) <sup>1)</sup>**

ASTM F963-17 2017	Standard Consumer Safety Specification for Toy Safety 4.3.5.1 Heavy Elements: Paint and Similar Surface Coating Materials 4.3.5.2 Heavy Elements: Substrate Materials
DIN EN 1811 2023-04	Reference test method for release of nickel from all post assemblies which are inserted into pierced parts of the human body and articles intended to come into direct and prolonged contact with the skin (EN 1811: 2023)
DIN EN 12472 2020-11	Method for the simulation of accelerated wear and corrosion for the detection of nickel release from coated items (EN 12472:2020)
CPSC-CH-E1003-09.1 2011-02	Standard Operating Procedure for Determining Lead (Pb) in Paint and Other Similar Surface Coatings
HC Part B: Method C-02.2.1 2021-06	Determination of Total Lead in Surface Coating Materials in Consumer Products by Inductively Coupled Plasma Mass Spectrometry (ICP-MS)

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HC Part B: Method C-02.3.1  
2021-02      Determination of Total Lead and Cadmium in Plastic Consumer Products by Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES)  
(Modification: *Analysis with ICP-MS*)

HC Part B: Method C-02.4.1  
2019-03      Determination of Total Lead and Cadmium in Metallic Consumer Products by Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES)  
(Modification: *Analysis with ICP-MS*)

**1.4 Determination of organic compounds in textiles and leather using gas chromatography (GC) with mass selective detectors (MS, MS/MS) 2)**

DIN EN ISO 17881-1  
2016-09      Textiles - Determination of certain flame retardants - Part 1: Brominated flame retardants (ISO 17881-1:2016)  
(Modification: *Here also for leather; additional analytes: 2,2',4,4',5,5'-Hexabromobiphenyl, 2-Bromodiphenylether, 2,4-Dibromodiphenylether, 2,2,4'-Tribromodiphenylether, 2,2',4,4',5-Pentabromodiphenylether, 2,2',3,3',4,4',5,5',6-Nonabromodiphenylether, (2-Ethylhexyl)-2,3,4,5-tetrabromobenzoate*)

DIN EN ISO 23702-1  
2019-02      Leather - Organic fluorine - Part 1: Determination of non-volatile compounds by extraction method using liquid chromatography/tandem mass spectrometry detector (LC-MS/MS) (ISO 23702-1:2018)  
(Modification: *Here also for textile; method also GC-MS; Additional analytes: N-MeFOSAA, N-EtFOSAA, L-PFDS, L-PFHpS, 4:2 FTS, 6:2 FTS, 8:2 FTS, EtFOSE, MeFOSE, FTOH 4:2, FTOH 6:2, FTOH 8:2, FTOH 10:2, FTAC 6:2, FTAC 8:2, FTAC 10:2*)

**1.5 Determination of organic compounds in commodity goods in contact with human skin using liquid chromatography (LC) with mass-selective detectors (MS, MS/MS) <sup>1)</sup>**

DIN EN ISO 17881-2  
2016-09      Textiles - Determination of certain flame retardants - Part 2: Phosphorus flame retardants (ISO 17881-2:2016)  
(Modification: *Here also for leather; additional analytes: TBBPA, BIS, BBMP, TDCPP, TXP, Tri-o-cresylphosphate, TCPP, V6, IPTPP, TBPH*)

DIN EN ISO 23702-1  
2019-02      Leather - Organic fluorine - Part 1: Determination of non-volatile compounds by extraction method using liquid chromatography/tandem mass spectrometry detector (LC-MS/MS) (ISO 23702-1:2018)  
(Modification: *Here also for textile; method also GC-MS; additional analytes: N-MeFOSAA, N-EtFOSAA, L-PFDS, L-PFHpS, 4:2 FTS, 6:2 FTS, 8:2 FTS, EtFOSE, MeFOSE, FTOH 4:2, FTOH 6:2, FTOH 8:2, FTOH 10:2, FTAC 6:2, FTAC 8:2, FTAC 10:2*)

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**1.6 Analysis of steel from furniture and consumer products by spark atomic emission spectrometry**

ASTM E1086-22 Analysis of Austenitic Stainless Steel by Spark Atomic Emission  
2022 Spectrometry

**1.7 Determination of the pH value**

DIN EN ISO 3071 Textiles - Determination of pH of aqueous extract  
2020-05 (ISO 3071:2020)

**1.8 Qualitative testing for the presence of formaldehyde**

SOP-QM-11.HK.02.A5.010 Qualitative detection of formaldehyde in textiles and accessories  
2021-12

**1.9 Quantitative determination of the content of free and partially releasable formaldehyde**

JIS L 1041 Quantitative determination of free and partly cleavable  
2011-07 formaldehyde on finished textiles (acetylacetone method)  
Pursuant to the Japanese Harmful Substance-Containing Household  
Products Control Law No. 112

**1.10 Determination of heavy metals**

DIN EN 16711-1 Textiles - Determination of metal content - Part 1: Determination of  
2016-02 metals using microwave digestion (EN 16711-1:2015)  
(Modification: *Additional analytes: Se, Mn, Zn, Sn, Ba, Ag, Fe*)

DIN EN 16711-2 Textiles - Determination of metal content - Part 2: Determination of  
2016-02 metals extracted by acidic artificial perspiration solution  
(EN 16711-2:2015)  
(Modification: *Additional analytes: Ag, Sn, Zn, Mn*)

**1.11 Extraction with artificial acid sweat solution**

DIN EN ISO 17294-2 Water quality - Application of inductively coupled plasma mass  
2017-01 spectrometry (ICP-MS) - Part 2: Determination of selected elements  
including uranium isotopes (ISO 17294-2:2016)  
(*Exclude analysis with uranium isotopes*)



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DIN EN 1811  
2023-04                      Reference test method for release of nickel from all post assemblies which are inserted into pierced parts of the human body and articles intended to come into direct and prolonged contact with the skin (EN 1811: 2023)

DIN EN 12472  
2020-11                      Method for the simulation of accelerated wear and corrosion for the detection of nickel release from coated items (EN 12472:2020)

**1.12 Digestion of the samples**

CPSC-CH-E1001-08.3  
2012-11                      Standard Operation Procedure for Determining Total Lead (Pb) in Children’s Metal Products (Including Children’s Metal Jewelry) (Limitation: *here only sample preparation*)

HC Part B: Method C-02.3.1  
2021-02                      Determination of Total Lead and Cadmium in Plastic Consumer Products by Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES) (Limitation: *here only sample preparation*)

**1.13 Test for chromium (VI)**

ISO 11083  
1994-08                      Water quality - Determination of chromium(VI) - Spectrometric method using 1,5-diphenylcarbazide (Modification: *Here for textile*)

DIN EN ISO 17075-1  
2017-05                      Leather - Chemical determination of chromium(VI) content in leather - Part 1: Colorimetric method (Modification: *Here also for textile*)

**1.14 Determination of the content of phenols**

DIN 50009  
2021-01                      Textiles - Determination of tetrachlorophenol-, trichlorophenol-, dichlorophenol-, monochlorophenol-isomers and pentachlorophenol content

DIN EN ISO 17070  
2015-05                      Leather - Chemical tests - Determination of tetrachlorophenol-, trichlorophenol-, dichlorophenol-, monochlorophenol-isomers and pentachlorophenol content

**1.15 Determination of the content of glyoxal**

DIN 54603  
2008-08                      Testing of paper, paperboard and board - Determination of glyoxal content (Modification: *Here for textile and leather; analysis by HPLC-DAD*)

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**1.16 Determination of the content of softeners**

DIN EN ISO 14389 2014-10	Textiles - Determination of the phthalate content - Tetrahydrofuran method (Modification: <i>Additional analytes: Tris (2-chlorethyl) phosphate, Dimethylphthalate, Diethylphthalate, Di-n-propylphthalate, Di-iso-pentylphthalate, n-Pentyl-iso-pentylphthalate, Di-iso-octylphthalate, Di-iso-hexylphthalate, Di-n-hexylphthalate, Di-n-nonylphthalate and Di-undecylphthalate</i> )
GB/T 20388 2016-04	Textiles - Determination of the phthalate content - Tetrahydrofuran method

**1.17 Determination of the content of organic tin compounds**

DIN EN ISO 22744-1 2020-09	Textiles and textile products - Determination of organotin compounds - Part 1: Derivatisation method using gas chromatography (Modification: <i>Additional analytes: Tetraoctyltin ; extraction solution</i> )
DIN CEN ISO/TS 16179 2012-12	Footwear - Critical substances potentially present in footwear and footwear components - Determination of organotin compounds in footwear materials (Modification: Matrix also for plastic. Extension for tri-n-propyl- and tri-n-octyltin.)

**1.18 Determination of the content of PFC's**

DIN EN ISO 23702-1 2019-02	Leather - Organic fluorine - Part 1: Determination of non-volatile compounds by extraction method using liquid chromatography/ tandem mass spectrometry detector (LC-MS/MS) (ISO 23702-1:2018) (Modification: <i>Here also for textile; method also GC-MS; additional analytes: N-MeFOSAA, N-EtFOSAA, L-PFDS, L-PFHpS, 4:2 FTS, 6:2 FTS, 8:2 FTS, EtFOSE, MeFOSE, FTOH 4:2, FTOH 6:2, FTOH 8:2, FTOH 10:2, FTAC 6:2, FTAC 8:2, FTAC 10:2</i> )
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**1.19 Determination of the content of DMFu**

DIN EN ISO 16186 2021-09	Footwear - Critical substances potentially present in footwear and footwear components - Determination of dimethyl fumarate (DMFu)
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**1.20 Determination of the Azo-colorants**

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DIN ISO EN 14362-1 2017-05	Textiles - Methods for determination of certain aromatic amines derived from azo colorants - Part 1: Detection of the use of certain azo colorants accessible with and without extracting the fibres (ISO 14362-1:2017) (Modification: <i>Additional analytes: 2,4-Xylidine, 2,6-Xylidine, Aniline, 4-Chloro-o-toluidinium chloride, 2,4,5-Trimethylaniline hydrochloride, 2-Naphthylammoniumacetate, 2,4-Diaminoanisoole sulphate, p-Phenylenediamine, p-Phenetidine, p-Anisidine, 2,5-Diaminotoluene and 3,3'-Diaminobenzidine</i> )
DIN EN ISO 14362-3 2017-05	Textiles - Methods for determination of certain aromatic amines derived from azo colorants - Part 3: Detection of the use of certain azo colorants, which may release 4-aminoazobenzene (ISO 14362-3:2017)
DIN EN ISO 17234-1 2020-12	Leather - Chemical tests for the determination of certain azo colorants in dyed leathers - Part 1: Determination of certain aromatic amines derived from azo colorants (ISO 17234-1:2020) (Modification: <i>Additional analytes: Aniline, 4-Chloro-o-toluidinium chloride, 2,4,5-Trimethylaniline hydrochloride, 2-Naphthylammoniumacetate, 2,4-Diaminoanisoole sulphate, p-Phenylenediamine, p-Phenetidine, p-Anisidine, 2,5-Diaminotoluene and 3,3'-Diaminobenzidine</i> )
DIN EN ISO 17234-2 2011-06	Leather - Chemical tests for the determination of certain azo colorants in dyed leathers - Part 2: Determination of 4-aminoazobenzene (ISO 17234-2:2011)
GB/T 17592 2011-12	Textiles - Determination of the Banned Azo Colourants
GB/T 23344 2009-03	Textiles - Determination of 4-aminoazobenzene

**1.21 Test for dyestuffs and pigments**

DIN 54231 2005-11	Textiles - Detection of disperse dyestuffs (Modification: <i>Here also for leather; additional analytes: Quinoline and Iso-quinoline</i> )
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**1.22 Determination of the content of chlorinated benzenes and toluenes**

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DIN EN 17137  
2019-02                      Textiles - Determination of the content of compounds based on chlorobenzenes and chlorotoluenes (EN 17137:2018)  
(Modification: *Here also for leather*)

**1.23 Determination of the content of SCCP**

DIN EN ISO 18219-1  
2021-09                      Leather - Determination of chlorinated hydrocarbons in leather - Part 1: Chromatographic method for short-chain chlorinated paraffins (SCCP) (ISO 18219-1:2021)  
(Modification: *Evaluation and calculation, extraction solution*)

DIN EN ISO 18219-2  
2021-09                      Leather - Determination of chlorinated hydrocarbons in leather - Part 2: Chromatographic method for middle-chain chlorinated paraffins (MCCPs) (ISO 18219-2:2021)  
(Modification: *Evaluation and calculation, extraction solution*)

DIN EN ISO 22818  
2021-06                      Textiles - Determination of short-chain chlorinated paraffins (SCCP) and middle-chain chlorinated paraffins (MCCP) in textile products out of different matrices by use of gas chromatography negative ion chemical ionization mass spectrometry (GC-NCI-MS) (ISO 22818:2021)  
(Modification: *Evaluation and calculation, extraction solution*)

**1.24 Determination of the content of PAK**

AfPS GS 2019:01 PAK  
2020-04                      Testing and Assessment of Polycyclic Aromatic Hydrocarbons (PAHs) in the awarding the GS Marks - Specification pursuant to Article 21(1) No. 3 of the Product Safety Act (ProdSG)  
(Limitation: *here only physical-chemical and chemical detection*)

DIN EN 17132  
2019-09                      Textiles and textile products - Determination of Polycyclic Aromatic Hydrocarbons (PAH), method using gas chromatography (EN 17132:2019)

**1.25 Determination of the content of solvent residues**

DIN EN ISO 16189  
2022-03                      Footwear - Critical substances potentially present in footwear and footwear components - Test method to quantitatively determine dimethylformamide in footwear materials (ISO 16189: 2021)  
(Modification: *Here also for textile; extraction method*)



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IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
JIS	Japan Industrial Standard
SOP-QM	In-house-method of Hohenstein Laboratories (HK) Limited