

DAP Deutsches Akkreditierungssystem Prüfwesen GmbH

Annex to Accreditation Certificate DAP-PL-3911.00 Accreditation based on DIN EN ISO/IEC 17025:2005

Period of validity: 2009-06-22 to 2014-06-21

Holder of the certificate: **TÜV Rheinland Produkt und Umwelt GmbH**

Am Grauen Stein
51105 Köln

Tests in the areas: **physical, physico-chemical and chemical analyses of water, bath water, wastewater, sludge, sediments and waste;**
sampling of wastewater, bath water, untreated and drinking water;
chemical, organoleptical and microbiological parameters according to Annexes 1, 2 and 3 as specified by the Trinkwasserverordnung (German Drinking Water Ordinance): 2001;
specified analyses of petroleum, petroleum products and solid fuels;
specified analyses of steel and iron materials as well as of non-ferrous metallic materials;
specified chemical and microbiological analyses of textile products, plastics, paper, leather and toys, varnish, wood and furniture;
mechanical test of toys;
migration tests of commodities;
specified chemical and microbiological analyses of cosmetics and washing agents and detergents;
analysis for inorganic and organic gaseous or particulate air pollutants of emission and immission samples;
determination (sampling and analysis) of inorganic and organic gaseous or particulate air constituents as well as of air constituents for specified parameters and areas at workplace measurements based on the Gefahrstoffverordnung (German Hazardous Goods Ordinance) § 9, para. 6 and annex III, No. 2;
sampling of fibrous air constituents at workplace measurements;
determination (sampling and analysis) of particulate and gaseous air-polluting constituents, of fibrous particulates and of microbiological indoor contaminations;
emission chamber testing - determination (sampling and analysis) of particulate and gaseous organic emissions;
sampling of fibrous particulates in solid materials

abbreviations used: see page 26

Within the marked testing areas the laboratory, without a prior information and consent of the DAP Deutsches Akkreditierungssystem Prüfwesen GmbH, is authorized to

- a) use standardised or equivalent testing methods, not included in this certificate.
- b) modify, enhance or newly develop testing methods.

The listed methods are exemplary.

1 Analyses of water, wastewater, drinking water

1.1 Sampling

DIN 38402-A 11 1995-12	General information - Sampling of waste water
DIN 38402-A 19 1988-04	Sampling of swimming pool and bathing pool water
DIN EN ISO 5667-3 (A 21) 2004-05	Water quality - Sampling - Part 3: Guidance on the preservation and handling of water samples
DIN EN ISO 5667-1 2007-04	Water quality - Sampling - Guidance on the design of sampling programmes and sampling techniques
DIN 38402-A 30 1998-07	Pretreatment, homogenization and aliquotation of non-homogeneous water samples
LAWA AQS- Merkblatt P-8/1 1993-01	Sampling of wastewater

1.2 Physical and physico-chemical characteristics

DIN EN ISO 7887 (C 1) 1994-12	Water quality - Examination and determination of colour
DIN EN ISO 7027 (C 2) 2000-04	Water quality - Determination of turbidity
DIN 38404-C 4 1976-12	Determination of temperature
DIN 38404-C 5 2005-08	Determination of pH value
DIN 38404-C 6 1984-05	Determination of the oxidation reduction (redox)
DIN EN 27888 (C 8) 1993-11	Water quality - Determination of electrical conductivity

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DIN EN ISO 9963-1 (C 23)
1996-02 Water quality - Determination of alkalinity - Part 1:
Determination of total and composite alkalinity

DIN EN ISO 9963-2 (C 24)
1996-02 Water quality - Determination of alkalinity - Part 2:
Determination of carbonate alkalinity

1.3 Anions

DIN 38405-D 1
1985-12 Determination of chloride ions

DIN EN 26777 (D 10)
1993-04 Water quality - Determination of nitrite - molecular
absorption spectrometric method

DIN EN ISO 11969 (D 18)
1996-1 Water quality - Determination of arsenic - Atomic absorption
spectrometric method (hydride technique)

DIN EN ISO 10304-1 (D 19)
1995-04 Water quality - Determination of dissolved fluoride, chloride,
nitrite, orthophosphate, bromide, nitrate and sulfate ions,
using liquid chromatography of ions - Part 1: Method for
water with low contamination

DIN EN ISO 10304-2 (D 20)
1996-11 Water quality - Determination of dissolved anions by liquid
chromatography of ions - Part 2: Determination of bromide,
chloride, nitrate, nitrite, orthophosphate and sulfate in waste
water

DIN 38405-D 24
1987-05 Photometric determination of chromium(VI) using
1,5-diphenylcarbonohydrazide

DIN EN ISO 6878
2004-09 Water quality - Determination of phosphorus - Ammonium
molybdate spectrometric method

1.4 Cations

DIN EN ISO 15586 (E 4)
2004-02 Water quality - Determination of trace elements using atomic
absorption spectrometry with graphite furnace

DIN 38406-E 5
1983-10 Determination of ammonia-nitrogen

DIN EN 1483 (E 12)
2007-07 Water quality - Determination of mercury

DIN EN ISO 11885 (E 22)
1998-04 Water quality - Determination of 33 elements by inductively
coupled plasma atomic emission spectroscopy

DIN EN ISO 17294-2 (E 29)
2005-02 Water quality - Application of inductively coupled plasma
mass spectrometry (ICP-MS) - Part 2: Determination of
62 elements

1.5 Jointly determinable substances

DIN 38407-F 2 1993-02	Determination of low volatile halogenated hydrocarbons by gas chromatography
DIN EN ISO 10301 (F 4) 1997-08	Water quality - Determination of highly volatile halogenated hydrocarbons - Gas-chromatographic methods
DIN 38407-F 8 1995-10	Determination of 6 polycyclic aromatic hydrocarbons (PAH) in water by high performance liquid chromatography (HPLC)
DIN 38407-F 9 1991-05	Determination of benzene and some of its derivatives by gas chromatography
DIN EN 12766-1 2000-11	Petroleum products and used oils - Determination of PCBs and related products - Part 1: Separation and determination of selected PCB congeners by gas chromatography (GC) using an electron capture detector (ECD) (Deviation for water: <i>Extraction with hexane</i>)
DIN EN ISO 17353 2005-11	Water quality - Determination of selected organotin compounds - Gas chromatographic method
DIN EN ISO 17993 2004-03	Water quality - Determination of 15 polycyclic aromatic hydrocarbons (PAH) in water by HPLC with fluorescence detection after liquid-liquid extraction

1.6 Gaseous constituents

DIN EN ISO 7393-1 2000-04	Water quality - Determination of free chlorine and total chlorine - Part 1: Titrimetric method using N,N-diethyl-1,4-phenylenediamine
DIN EN ISO 7393-2 2000-04	Water quality - Determination of free chlorine and total chlorine - Part 2: Colorimetric method using N,N-diethyl-1,4-phenylenediamine, for routine control purposes
DIN EN 25814 (G 22) 1992-11	Water quality - Determination of dissolved oxygen by the electrochemical probe method

1.7 General measures of effect and substance characteristics

DIN 38409-H 1 1987-01	Determination of total dry residue, filtrate dry residue and residue on ignition
DIN 38409-H 2 1987-03	Parameters characterizing effects and substances - Determination of filterable matter and the residue on ignition
DIN EN ISO 8467 (H 5) 1995-05	Water quality - Determination of permanganate index
DIN 38409-H 7 2005-12	Determination of acid and base capacity

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DIN 38409-H 9
1980-07 Determination of the settleable matter by volume in water and waste water

DIN 38409-H 16
1984-06 Determination of the phenol index

1.8 Single components

DIN 38413-P 2
1988-05 Determination of vinyl chloride (chloroethene) using headspace gas chromatography

1.9 Analyses of sludge, sediments and waste

DIN EN 12880
2001-02 Determination of water content and dry residue respectively dry matter

DIN EN 12879
2001-02 Determination of the loss and the residue on ignition of dry mass of sludge

DIN 38414-S 4
1984-10 Determination of leachability by water

DIN EN 13346 (S 7)
2001-04 Determination of trace elements and phosphorus - Aqua regia extraction methods

DIN 38414-S 20
1996-01 Determination of 6 polychlorinated biphenyls (PCB)

DIN EN 12766-1
2000-11 Petroleum products and used oils - Determination of PCBs and related products - Part 1: Separation and determination of selected PCB congeners by gas chromatography (GC) using an electron capture detector (ECD)
(Deviation for waste: *Extraction with hexane*)

QMA 2.516.231
2005-05 GC/MS-Screening, qualitative and semi quantitative exploratory analysis after extraction

2 Analysis of drinking water according to the German Drinking Water Ordinance: 2001 *

2.1 Sampling

DIN EN ISO 5667-1
2007-04 Water quality - Sampling - Part 1: Guidance on the design of sampling programmes and sampling techniques

DIN 38402-A 14
1986-03 Sampling of untreated water and drinking water

DIN EN ISO 5667-3 (A 21)
2004-05 Water quality - Sampling - Part 3: Guidance on the preservation and handling of water samples

* This accreditation does not replace the acceptance or admission procedure of the appropriate authority according to the requirements of the legislator.

2.2 Microbiological parameters from annex 1, 3 and 4.I.2

DIN 38411-K 1 1983-02	Preparation for the microbiological examination of water samples
DIN V ENV ISO 13843 (K 2) 2001-12	Water quality - Guidance on validation of microbiological methods
DIN EN 12780 (K 11) 2002-08	Water quality - Detection and enumeration of <i>Pseudomonas aeruginosa</i> by membrane filtration
DIN EN ISO 9308-1 (K 12) 2001-07	Water quality - Detection and enumeration of <i>Escherichia coli</i> and coliform bacteria - Part 1: Membrane filtration method
DIN EN ISO 7899-2 (K 15) 2000-11	Water quality - Detection and enumeration of intestinal enterococci - Part 2: Membrane filtration method
Trinkwasserverordnung 05.12.1990	Quantitative Bestimmung der kultivierbare Mikroorganismen Bestimmung der Koloniezahl durch Einimpfen in ein Nähr- agarmedium (Koloniezahl bei 22 °C und 36 °C) <i>(withdrawn document)</i>
Trinkwasserverordnung 21.05.2001	Nachweis von <i>Clostridium perfringens</i> mittels Membran- filtration (mCP-Methode) bei 44 ± 1 °C über 21 ± 3 Std.
ISO 11731-2 2004-05	Water quality - Detection and enumeration of <i>Legionella</i>
Gesundheitsblatt 2000-11	Nachweis von Legionellen in Trinkwasser und Badebecken- wasser - Empfehlung des Umweltbundesamtes nach Anhö- rung der Trink- und Badewasserkommission

2.3 Chemical parameters from annex 2 (part I)

DIN EN ISO 11885 (E 22) 1998-04	Water quality - Determination of 33 elements by inductively coupled plasma atomic emission spectroscopy
DIN EN ISO 17294-2 2005-2	Water quality - Application of inductively coupled plasma mass spectrometry (ICP-MS) - Part 2: Determination of 62 elements
DIN EN 1483 (E 12) 2007-07	Water quality - Determination of mercury
DIN 38407-F 9 1991-05	Determination of benzene and some of its derivatives by gas chromatography
DIN 38407-F 2 1993-02	Determination of low volatile halogenated hydrocarbons by gas chromatography
DIN EN ISO 10301 (F 4) 1997-08	Water quality - Determination of highly volatile halogenated hydrocarbons - Gas-chromatographic methods
DIN 38405-D 24 1987-05	Photometric determination of chromium(VI) using 1,5-diphenylcarbonohydrazide

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DIN EN ISO 10304-1 (D 19)
1995-04 Water quality - Determination of dissolved fluoride, chloride, nitrite, orthophosphate, bromide, nitrate and sulfate ions, using liquid chromatography of ions - Part 1: Method for water with low contamination

2.4 Chemical parameters from annex 2 (Part II)

DIN EN ISO 11885 (E 22)
1998-04 Water quality - Determination of 33 elements by inductively coupled plasma atomic emission spectroscopy

DIN EN ISO 17294-2
2005-2 Water quality - Application of inductively coupled plasma mass spectrometry (ICP-MS) - Part 2: Determination of 62 elements

DIN EN ISO 11969 (D 18)
1996-11 Water quality - Determination of arsenic - Atomic absorption spectrometric method (hydride technique)

DIN EN ISO 10301 (F 4)
1997-08 Water quality - Determination of highly volatile halogenated hydrocarbons - Gas-chromatographic methods

DIN 38413-P 2
1988-05 Determination of vinyl chloride (chloroethene) by headspace gas chromatography

DIN EN ISO 17993
2004-03 Water quality - Determination of 15 polycyclic aromatic hydrocarbons (PAH) in water by HPLC with fluorescence detection after liquid-liquid extraction

DIN EN 26777 (D 10)
1993-04 Water quality - determination of nitrite; molecular absorption spectrometric method

DIN EN ISO 10304-1 (D 19)
1995-04 Water quality - Determination of dissolved fluoride, chloride, nitrite, orthophosphate, bromide, nitrate and sulfate ions, using liquid chromatography of ions - Part 1: Method for water with low contamination

2.5 Chemical indicator parameters from annex 3

DIN EN ISO 11885 (E 22)
1998-04 Water quality - Determination of 33 elements by inductively coupled plasma atomic emission spectroscopy

DIN EN ISO 17294-2
2005-02 Water quality - Application of inductively coupled plasma mass spectrometry (ICP-MS) - Part 2: Determination of 62 elements

DEV B 1/2
1971 Prüfung auf Geruch und Geschmack

DIN 38406-E 5
1983-10 Determination of ammonia-nitrogen

DIN EN ISO 8467 (H 5)
1995-05 Water quality - Determination of permanganate index

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DIN 38405-D 1 1985-12	Determination of chloride ions
DIN EN ISO 10304-1 (D 19) 1995-04	Water quality - Determination of dissolved fluoride, chloride, nitrite, orthophosphate, bromide, nitrate and sulfate ions, using liquid chromatography of ions - Part 1: Method for water with low contamination
DIN EN ISO 7887 (C 1) 1994-12	Water quality - Examination and determination of colour
DIN EN 27888 (C 8) 1993-11	Water quality - Determination of electrical conductivity
DIN 38405-D 5 1985-01	Determination of sulfate ions
DIN EN ISO 7027 (C 2) 2000-04	Water quality - Determination of turbidity
DIN 38404-5 2005-08	Determination of pH value

2.6 Further chemical parameters according to § 14 Abs. 1 TrinkwV 2001

DIN EN ISO 11885 (E 22) 1998-04	Water quality - Determination of 33 elements by inductively coupled plasma atomic emission spectroscopy
DIN EN ISO 17294-2 2005-02	Water quality - Application of inductively coupled plasma mass spectrometry (ICP-MS) - Part 2: Determination of 62 elements
DIN 38409-H 7 2005-12	Determination of acid and base capacity

3 Analyses of petroleum, petroleum products and solid fuels

3.1 Petroleum and petroleum products

DIN 51755 1974-03	Determination of Flash Point by the closed tester according to Abel-Pensky
DIN EN ISO 2719 2003-09	Determination of flash point, Pensky-Martens closed cup method

3.2 Solid fuels

DIN EN 1860-2 2005-05	Appliances, solid fuels and firelighters for barbecuing - Part 2: Barbecue charcoal and barbecue charcoal briquettes - Requirements and test methods
DIN 22019-1 1985-03	Particle-size-distribution > 20 µm by sieve-analysis
DIN 66165-2 1987-04	Particle size analysis; sieve analysis; procedure
DIN 51719 1997-07	Determination of ash content
DIN 51720 2001-03	Determination of volatile matter content
DIN EN 15494 2008-01	Candles - Product safety labels
DIN EN 15493 2008-01	Candles - Specification for fire safety
DIN EN 15426 2008-01	Candles - Specification for sooting behaviour

4 Analyses of steel and ferrous materials

DIN EN ISO 11885 (E 22) 1998-04	Water quality - Determination of 33 elements by inductively coupled plasma atomic emission spectroscopy (Deviation for steel: <i>Acid decomposition according to QMA 2.516.019, 2.516.020, 2.516.021 and 2.516.022</i>)
QMA 2.516.019 2005-05	Digeston 1: Digestion of steel by HClO ₄ , HCl, H ₃ PO ₄ for analysis of wolfram (W)
QMA 2.516.020 2005-05	Digeston 2: Digestion of steel by HClO ₄ , HNO ₃ , HCl, HF for analysis of Al, Cr, Co, Cu, Fe, Mn, Mo, Ni, Ti, V
QMA 2.516.021 2005-05	Digeston 3: Digestion of steel by HCl/HNO ₃ for analysis of Si, Al and P
QMA 2.516.022 2005-05	Digeston 4: Digestion of steel by HCl/HNO ₃ , HF for analysis of Nb, Te, Bi, Se, Pb, Sb and Sn

5 Chromatographic methods of the flexible accreditation for the analyses of textiles, synthetic fibres, leather products, plastic, foam, paper, varnish, wood, indirect material, cosmetics, washing agents, detergents, furniture and toys

BVL B 82.02-2 2004-06	Untersuchung von Bedarfsgegenständen - Verfahren für die Bestimmung bestimmter aromatischer Amine aus Azofarbstoffen in Textilien - Teil 1: Verwendungsnachweis bestimmter Azofarbstoffe ohne vorherige Extraktion
BVL B 82.02-3 (V) 2004-06	Untersuchung von Bedarfsgegenständen - Bestimmung bestimmter Azofarbstoffe in gefärbten Ledern
BVL B 82.02-4 2004-06	Untersuchung von Bedarfsgegenständen - Verfahren für die Bestimmung aromatischer Amine aus Azofarbstoffen in Textilien - Teil 2: Verwendungsnachweis bestimmter Azofarbstoffe durch Extraktion der Faser
DIN EN 14362-1 2003-12	Textiles - Methods for determination of certain aromatic amines derived from azo colorants - Part 1: Detection of the use of certain azo colorants accessible without extraction
DIN EN 14362-2 2003-12	Textiles - Methods for determination of certain aromatic amines derived from azo colorants - Part 2: Detection of the use of certain azo colorants accessible by extracting the fibres
DIN EN ISO 17234 2008-03	Leather - Chemical tests - Determination of certain azo colourants in dyed leathers
DIN EN ISO 17353 2005-11	Water quality - Determination of selected organotin compounds - Gas chromatographic method (Deviation for material samples: <i>Extraction with methanolic KOH-solution</i>)
DIN EN ISO 17070 2007-01	Leather - Chemical tests - Determination of pentachlorophenol content
BVL B 82.02-8 2001-06	Untersuchung von Bedarfsgegenständen; Nachweis und Bestimmung von Pentachlorphenol in Bedarfsgegenständen, insbesondere aus Leder und Textilien (Referenzverfahren)
QMA 2.516.218 2008-03	Gas-chromatographic determination of pentachlorophenol, tri- and tetrachlorophenol and their salts in textiles and leather products according to DIN EN ISO 17070 [01:2007]
DIN 54232 2007-07	Textiles - Determination of the content of bonds based on chlorbenzene and chlortoluene
DIN 38407-F 2 1993-02	Determination of low volatile halogenated hydrocarbons by gas chromatography (Deviation for textiles: <i>Extraction with n-hexane</i>)
DIN EN ISO 18856 2005-11	Water quality - Determination of selected phthalates using gas chromatography/mass spectrometry (Deviation for material samples: <i>Extraction with MTBE</i>)

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CPSC-CH-C1001-09.1 2009-03	Test Method: CPCS-CH-C1001-09.1, Standard Operating Procedure for Determination of Phthalates; March 3, 2009
	in conjunction with:
	<i>QMA 2.516.271</i> <i>Determination of Phthalates in PVC or other polymers by GC-MS after extraction with THF</i>
QMA 2.516.235 2008-04	Quantitative determination of plasticizers in commodities and cosmetics by GC/MS according to DIN EN ISO 18856 [2005:11]
IEC 111/116/FDIS IEC 62321 2008-08	IEC 62321, Ed. 1: Electrotechnical products - Determination of levels of six regulated substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ethers)
DIN EN 62321 2006-07	Procedures for the determination of levels of six regulated substances (Lead, Mercury, Cadmium, Hexavalent Chromium, Polybrominated Biphenyls, Polybrominated Diphenyl Ethers) in electrotechnical products (IEC 111/54/CDV:2006)
QMA 2.516.250 2008-03	Gas chromatographic determination of triclosane in textiles, plastic and cosmetics by GC/MS
QMA 2.516.203 1998-05	Gas chromatographic determination of wood preservatives in wood and wood-based panels
DIN EN 12766-1 2000-11	Petroleum products and used oils - Determination of PCBs and related products - Part 1: Separation and determination of selected PCB congeners by gas chromatography (GC) using an electron capture detector (ECD); (Deviation for elastic materials: <i>Extraction with toluene</i>)
DIN ISO 18287 2006-05	Determination of polycyclic aromatic hydrocarbons (PAH) - Gas chromatographic method with mass spectrometric detection, deviation extraction by toluene
ZEK 01.2-08 2008-12	Harmonized Method for Determination of Polycyclic Aromatic Hydrocarbons (PAH) in plastic sampling, gas chromatographic method with mass spectrometric detection
QMA 2.516.272 2009-02	Determination of dimethylformamide after extraction with methanol, identification and quantification by GC-MS
QMA 2.516.273 2009-02	Determination of dimethylfumarate after extraction with hexane:acetone, identification and quantification by GC-MS
QMA 2.516.252 2009-01	Gas chromatographic determination of brominated flame retardants in solid matters by GC-MS

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EN 71-11 Clause 5.2 2006-01	Safety of toys - Part 11: Organic chemical compounds; Methods of analysis - clause 5.2 Flame retardants (Deviation: <i>Dissolving in toluene and GC-MS instead of LC-MS</i>)
EN 71-11 Clause 5.4 2006-01	Safety of toys - Part 11: Organic chemical compounds; Methods of analysis - clause 5.4 Primary aromatic amines
EN 71-11 Clause 5.5 2006-01	Safety of toys - Part 11: Organic chemical compounds; Methods of analysis - clause 5.5 Monomers and solvents
EN 71-11 Clause 5.6 2006-01	Safety of toys - Part 11: Organic chemical compounds; Methods of analysis - clause 5.6 Wood preservatives
EN 71-11 Clause 5.8 2006-01	Safety of toys - Part 11: Organic chemical compounds; Methods of analysis - clause 5.8 Plasticisers
EN 71-7 Clause 4.2 2002-11	Safety of toys - Part 7: Finger paints; Requirements and test methods - clause 4.2 Colourants
EN 71-7 Clause 4.3 2002-11	Safety of toys - Part 7: Finger paints; Requirements and test methods - clause 4.3 Preservatives
EN 71-7 Clause 4.5 2002-11	Safety of toys - Part 7: Finger paints; Requirements and test methods - clause 4.5 Primary aromatic amines
QMA 2.516.251 2008-06	Determination of nonylphenol and 4-n-octylphenol in various matrices by GC/MS according to DIN EN ISO 18857-1 [2007-02]
QMA 2.516.250 2008-03	Gas chromatographic determination of triclosane in textiles, plastic and cosmetics by GC/MS
QMA 2.516.267 2008-03	Determination of BTEX-aromatics by GC-FID respectively GC-MS
QMA 2.516.268 2008-03	Determination of alcohols by gas chromatography
QMA 2.516.269 2008-03	Determination of allergenic scents by gas chromatography
BVL K 84.00-8 1982-11	Bestimmung von Methanol im Verhältnis zu Ethanol oder Propanol-2 (Abweichung: <i>Verwendung einer Kapillarsäule</i>)

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DIN EN ISO 17226-1 2006-10	Leather - Chemical tests - Part 1: Determination of formaldehyde content in leather by High Performance Liquid Chromatography
DIN 54231 2005-11	Textiles - Detection of disperse dyestuffs
QMA 2.516.315 2008-11	Determination of carcinogenic and allergenic dyestuffs in textiles, colourants and various materials of toys by HPLC-DAD/MS according to DIN 54231 [11:2005] and DIN EN 71 - part 9-11
EN 71-11 Clause 5.3 2006-01	Safety of toys - Part 11: Organic chemical compounds; Methods of analysis - clause 5.3 Colourants by LC-MS
EN 71-11 Clause 5.7 2006-01	Safety of toys - Part 11: Organic chemical compounds; Methods of analysis - clause 5.7 Preservatives by LC-MS
QMA 2516.270 2008-04	Determination of preservatives in cosmetics and washing agents and detergents by HPLC-DAD

6 Spectroscopic methods of the flexible accreditation for the analyses of textiles, synthetic fibres, leather products, plastic, foam, paper, varnish, wood, glass, ceramic, elastomer, silicone, indirect material, metallic commodities, cosmetics, washing agents, detergents, furniture and toys

QMA 2.516.005 2003-01	Sample preparation of textiles and leather for determination of leachable heavy metals by ICP-MS respectively ICP-OES and AAS
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in conjunction with:

DIN EN ISO 17294-2 2005-2 *Water quality - Application of inductively coupled plasma mass spectrometry (ICP-MS) - Part 2: Determination of 62 elements*

DIN EN 12472 2006-03	Method for the simulation of wear and corrosion for the detection of nickel release from coated items
DIN EN 1811 2008-09	Reference test method for release of nickel from products intended to come into direct and prolonged contact with the skin
QMA 2.516.006 2008-11	Microwave digestion of solid samples (e.g. cosmetics, plastic, colouring, wood) for determination of heavy metals (e.g. As, Pb, Cd, Sb, Hg) by ICP-MS, ICP-OES respectively hydride system

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QMA 2.516.010 2008-06	Classic wet digestion (hotplate) for the determination of the total content of cadmium in plastics, varnish and paint in conjunction with DIN EN 1122 [2002:02] and 3050B [1996:12] in conjunction with: <i>ASTM E 1645-01</i> <i>Standard Practice for Preparation of Dried Paint Samples by Hotplate or Microwave Digestion for Subsequent Lead Analysis</i> <i>2001</i>
QMA 2.516.007 2008-11	Determination of heavy metals by ICP-MS respectively ICP-OES in digestion solutions (e.g. cosmetics, plastic, colouring, wood)
QMA 2.516.008 2008-11	Determination of mercury by hydride system in in digestion solutions (e.g. cosmetics, plastic, colouring, wood) in conjunction with: <i>ASTM E 1613-04</i> <i>Standard Test Method for Determination of Lead by Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES), Flame Absorption Spectrometry (FAAS), or Graphite Furnace Atomic Absorption Spectrometry (GFAAS) Techniques</i> <i>2004</i> <i>US 16 CFR</i> <i>16 Commercial Practices Chapter II - Consumer Product Safety Commission - Part 1303: Ban of lead-containing paint and certain consumer products bearing leads-containing paint</i> <i>Part 1303</i> <i>2007-01</i> <i>H.R. 4040</i> <i>Consumer Product Safety Improvement Act of 2008 (CPSIA), Title I, Children's Product Safety</i> <i>2008</i>
CPSC-CH-E1003-09 2009-03	CPSC-CH-E1003-09, Standard Operating Procedure for Determining Lead (Pb) in Paint.
CPSC-CH-E1001-08 2008-12	testing for lead content in metal and metal alloy parts of children's metal jewellery in accordance with CPSC Standard Operating Procedure for Determining Total Lead (Pb) in Children's Metal Products (including Children's Metal Jewelry), CPSC-CH-E1001-08
ASTM F 963-08 2008	Standard Consumer Safety Specification for Toy Safety - Chapter 8.3 Method to dissolve soluble matter
DIN EN 71-3 2002-11	Safety of toys; Migration of certain elements

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EN 71-7
Clause 4.4
2002-11

Safety of toys - Part 7: Finger paints; Requirements and test methods - clause 4.4 migration of certain elements

in conjunction with:

*DIN EN ISO 17294-2
2005-2*

Water quality - Application of inductively coupled plasma mass spectrometry (ICP-MS) - Part 2: Determination of 62 elements

IEC 111/116/FDIS
IEC 62321
2008-08

IEC 62321, Ed. 1: Electrotechnical products - Determination of levels of six regulated substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ethers)

DIN EN 62321
2006-07

Procedures for the determination of levels of six regulated substances (Lead, Mercury, Cadmium, Hexavalent Chromium, Polybrominated Biphenyls, Polybrominated Diphenyl Ethers) in electrotechnical products (IEC 111/54/CDV:2006)

QMA 2.516.043
2003-03

Digestion methods (microwave and wet decomposition) for determination of lead in plastic by ICP-MS respectively ICP-OES and AAS

DIN EN 1122
2002-02

Plastics - Determination of cadmium - Wet decomposition method

DIN EN 1388-1
1995-11

Materials and articles in contact with foodstuffs - Silicate surfaces - Part 1: Determination of the release of lead and cadmium from ceramic ware

DIN EN 1388-2
1995-11

Materials and articles in contact with foodstuffs - Silicate surfaces - Part 2: Determination of the release of lead and cadmium from silicate surfaces other than ceramic ware

ISO 6486-1
1999-12

Ceramic ware, glass-ceramic ware and glass dinnerware in contact with food - Release of lead and cadmium - Part 1: Test method

DIN EN 601
2004-07

Aluminium and aluminium alloys - Castings - Chemical composition of castings for use in contact with foodstuff

DIN 51032
1986-02

Ceramics, glass, glass ceramics, vitreous enamels; permissible limits for the release of lead and cadmium from articles intended for use in contact with foodstuffs

7 Electrometric, photometric, titrimetric, gravimetric, sensory and visual methods for the analyses of textiles, synthetic fibres, leather products, plastic, foam, paper, varnish, wood, glass, ceramic, elastomer, silicone, metallic commodities, indirect material, cosmetics, washing agents, detergents, furniture and toys

BVL B 82.02-1 1985-06	Untersuchung von Bedarfsgegenständen; Bestimmung der Formaldehydabgabe aus textilen Bedarfsgegenständen
DIN EN ISO 14184-1 1999-02	Textiles - Determination of formaldehyde - water extraction method
DIN EN ISO 14184-2 1998-10	Textiles - Determination of formaldehyde - vapour absorption method
DIN EN ISO 17226-2 2008-08	Leather - Chemical tests - Part 2: Determination of the formaldehyde content in leather by colourimetric analysis
DIN EN 120 1992-08	Wood-based panels; determination of formaldehyde content, extraction method called perforator method
DIN EN 717-3 1996-05	Wood-based panels; Determination of formaldehyde release - Part 3: Formaldehyde release by the flask method
DIN CEN/TS 13130-23 2005-05	Materials and articles in contact with foodstuffs - Plastics substances subject to limitation - Part 23: Determination of formaldehyde and hexamethylenetetramine in food stimulants
VdL-RL 03 1997-05	Richtlinie zur Bestimmung der Formaldehydkonzentration in wasserverdünnbaren Dispersionsfarben und verwandten Produkten
VDA 275 1994-07	Formteile für den Fahrzeuginnenraum - Bestimmung der Formaldehydabgabe - Messverfahren nach der modifizierten Flaschen-Methode
EN 1541 2001-04	Paper and board intended to come into contact with foodstuffs - Determination of formaldehyde in an aqueous extract
BVL K 84.00-7 Abs. 4 1991-09	Formaldehyd; Bestimmung der Gesamtmenge durch Kolorimetrie mit Acetylaceton
QMA 2.516.819 2008-03	Gravimetric determination of compounds extracted by ethanol or other solvents in various matrixes
DIN EN ISO 17075 2008-02	Leather - Chemical tests - Determination of chromium(VI) content
DIN EN ISO 17895 2005-06	Paints and varnishes; Determination of the volatile organic compound content of low-VOC emulsion paints (in-can VOC)
DIN EN ISO 4098 2006-04	Leather - Chemical tests - Determination of water-soluble matter, water soluble inorganic matter and water-soluble organic matter

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DIN EN ISO 4045 2008-05	Testing of leather - Determination of pH and deviation number of an aqueous leather extract
DIN EN ISO 3071 2006-05	Textiles - Determination of pH of aqueous extract
EN ISO 787-9 1995-03	General methods of test for pigments and extenders - Part 9: Determination of pH value of aqueous suspension
QMA 2.516.820 2008-03	Determination of pH in cosmetics and washing agents and detergents according to DIN 38404-5 (2005-08)
QMA 2.516.821 2008-03	Direct iodometric titration method for determination of total chlorine in washing agents and detergents according to DIN EN ISO 7393-3, annex B (2000-04)
QMA 2.516.822 2008-04	Gravimetric determination of dry residue in washing agents and detergents according to DIN EN 12880 (2001-02)
BVL B 80.30-1 (EG) 1998-01	Untersuchung von Bedarfsgegenständen - Grundregeln für die Ermittlung der Migration
BVL B 80.30-2 (EG) 1991-05	Untersuchung von Bedarfsgegenständen - Liste der Simulanzlösemittel
BVL B 80.30-3 (EG) 2002-09	Untersuchung von Bedarfsgegenständen - Weitere Vorschriften für die Prüfung auf Einhaltung der Migrationwerte
DIN EN 1186-1 2002-07	Materials and articles in contact with foodstuffs - Plastics - Part 1: Guide to the selection of conditions and test methods for overall migration
DIN EN 1186-3 2002-07	Materials and articles in contact with foodstuffs - Plastics - Part 3: Test methods for overall migration into aqueous simulants by total immersion
DIN EN 1186-9 2002-07	Materials and articles in contact with foodstuffs - Plastics - Part 9: Test methods for overall migration into aqueous simulants by article filling
DIN EN 1186-14 2002-12	Materials and articles in contact with foodstuffs - Plastics - Part 14: Test methods for 'substitute tests' for overall migration from plastics intended to come into contact with fatty foodstuffs using test media iso-octane and 95 % ethanol
CR 12471 Part 5.3.4 2002-08	Screening tests for nickel release from alloys and coatings in items that come into direct and prolonged contact with the skin
BVL B 82.10-1 1985-06	Untersuchung von Bedarfsgegenständen; Prüfung von bunten Kinderspielwaren auf Speichel und Schweißechtheit

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DIN V 53160-1 2002-10	Determination of the colourfastness of articles in common use - Part 1: Resistance to artificial saliva
DIN V 53160-2 2002-10	Determination of the colourfastness of articles in common use - Part 2: Resistance to artificial sweat

8 Analyses of textiles

DIN EN ISO 105-B 02 2002-07	Textiles - Tests for colour fastness - Part B02: Colour fastness to artificial light: Xenon arc fading lamp test
DIN EN ISO 105-C 06 1997-05	Textiles - Tests for colour fastness - Part C06: Colour fastness to domestic and commercial laundering
DIN EN ISO 105-D 01 1995-04	Textiles - Tests for colour fastness - Part D01: Colour fastness to dry cleaning
DIN EN ISO 105-E 01 1996-08	Textiles - Tests for colour fastness - Part E01: Colour fastness to water
DIN EN ISO 105-E 04 1996-08	Textiles - Tests for colour fastness - Part E04: Colour fastness to perspiration
DIN EN ISO 105-X 11 1996-10	Textiles - Tests for colour fastness - Part X11: Colour fastness to hot pressing
DIN EN ISO 105-X 12 2002-12	Textiles - Tests for colour fastness - Part X12: Colour fastness to rubbing
BS 4407 1988-07	Methods for quantitative analysis of fibre mixtures
DIN EN ISO 12945-2 2000-11	Textiles - Determination of fabric propensity to surface fuzzing and to pilling - Part 2: Modified Martindale method
DIN EN ISO 12947-2 2007-04	Textiles - Determination of abrasion resistance of fabrics by the Martindale method - Part 2: Determination of specimen breakdown
DIN EN ISO 14682 2008-02	Safety of children's clothing - Cords and drawstrings on children's clothing - Specifications
DIN EN 25077 1994-02	Textiles - determination of dimensional change in washing and drying

in conjunction with:

<i>DIN EN ISO 3759 1995-04</i>	<i>Textiles - Preparation, marking and measuring of fabric specimens and garments in tests for determination of dimensional change</i>
<i>DIN EN ISO 6330 2001-04</i>	<i>Textiles - Domestic washing and drying procedures for textile testing</i>

9 Microbiological analyses of commodities and other solid matters

DIN EN 1104 2005-11	Paper and board intended to come into contact with food-stuffs - Determination of the transfer of antimicrobial constituents
DIN EN ISO 20645 2005-02	Textile fabrics - Determination of antibacterial activity - Agar diffusion plate test
QMA 2.515.115 2006-07	Measurement of the concentration of germ content in material samples
The European Cosmetic Toiletry and Perfumery Association: Leitfaden für Mikrobiologisches Qualitäts-management kosmetischer Mittel 1998-04	Determination of total bioburden and pathogen routing germs in cosmetics

10 Mechanical-physical toy testing

EN 71-1+ A6 2008-05	Safety of toys - Part 1: Mechanical and physical properties (without clause 8.28.2.3.2)
EN 71-2+A1 2007-03	Safety of toys - Flammability
EN 71-8 + A1 + A2 2005-12	Safety of toys - Part 8: Swings, slides and similar activity toys for indoor and outdoor family domestic use
EN 1400-1 2002-09	Child use and care articles - Soothers for babies and young children - Part 1: General safety requirements and product information
EN 1400-2 2002-09	Child use and care articles - Soothers for babies and young children - Part 2: Mechanical requirements and tests
EN 1400-3 2002-09	Child use and care articles - Soothers for babies and young children - Part 3: Chemical requirements and tests

in conjunction with:

*US 16 CFR
Part 151
1977-06*

Requirements for pacifiers

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ASTM F 963-08
2008

Standard Consumer Safety Specification for Toy Safety
(without chapter 4.3 and 4.4)

in conjunction with:

*US 16 CFR
Part 1501
1991-09*

*Small Parts Regulations
Toys and products intended for use by
children under 3 years old
Method for identifying toys and other articles
intended for use by children under 3 years of
age which present choking, aspiration, or
ingestion hazards because of small parts*

11 Determination of inorganic fibrous particles (Sampling)

VDI 3492
2004-10

Indoor air measurement - Ambient air measurement -
Measurement of inorganic fibrous particles - Scanning
electron microscopy method

in conjunction with:

*DIN EN ISO 16000-7
2007-11*

*Indoor air - Part 7: Sampling strategy for
determination of airborne asbestos fibre
concentrations*

BGI 505-46
2004-04

Verfahren zur getrennten Bestimmung von lungengängigen
Asbestfasern und anderen anorganischen Fasern;
Rasterelektronenmikroskopisches Verfahren

VDI 3866 Blatt 5
2004-10

Determination of asbestos in technical products - Scanning
electron microscopy method

in conjunction with:

*VDI 3866 Blatt 1
2000-12*

*Determination of asbestos in technical
products - Principle - Sampling and sample
preparation*

12 Emission chamber testing

DIN 55666
1995-04

Testing of formaldehyde-emitting coating materials, melamin
foams and textiles - Determination of the equalization
concentration of formaldehyde in a small test chamber

VDA 277
1995-01

Nichtmetallische Werkstoffe der KFZ-Innenausstattung -
Bestimmung der Emission organischer Verbindungen

DIN EN 717-1
2005-01

Wood-based panels - Determination of formaldehyde release
Part 1: Formaldehyde emission by the chamber method

DIN ISO 16000-6
2004-12

Indoor air - Part 6: Determination of VOC in indoor and test
chamber air by active sampling on TENAX TA® sorbent,
thermal desorption and gas chromatography using MS/FID

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DIN EN ISO 16000-9 2008-04	Indoor air - Part 9: Determination of the emission of volatile organic compounds from building products and furnishing - Emission test chamber method
DIN EN ISO 16000-11 2006-04	Indoor air - Part 11: Determination of the emission of volatile organic compounds from building products and furnishing - Sampling, storage of samples and preparation of test specimens
ANSI/BIFMA M7.1 2007	Standard Test Method for Determining VOC Emissions from Office Furniture Systems, Components and Seating (mid-scale und small-scale chamber)

in conjunction with::

<i>ANSI/BIFMA X7.1 2007</i>	<i>Standard for Formaldehyde and TVOC Emissions of Low-emitting Office Furniture Systems and Seating</i>
<i>Greenguard GGTM.P066.R8 2008-10</i>	<i>Standard Method For Measuring and Evaluating Chemical Emissions from Building Materials, Finishes and Furnishings using Dynamic Environmental Chambers</i>

13 Determination of airborne harmful substances

13.1 Emission and Immission

13.1.1 Emission measurement (without sampling)

DIN EN 14385 2004-05	Stationary source emissions - Determination of the total emission of As, Cd, Cr, Co, Cu, Mn, Ni, Pb, Sb, Tl and V
DIN EN 13211 2001-06	Air quality - Stationary source emissions - Manual method of determination of the concentration of total mercury - Analysis of the filter
VDI 3874 2006-12	Stationary source emissions - Determination of polycyclic aromatic hydrocarbons (PAH) - GC/MC method
DIN EN 13649 2002-05	Stationary source emissions - Determination of the mass concentration of individual gaseous organic compounds - Activated carbon and solvent desorption method
VDI 3862 sheet 2 2000-12	Gaseous emission measurement - Measurement of aliphatic and aromatic aldehydes and ketones by DNPH method - Impinger method
VDI 3862 sheet 3 2000-12	Gaseous emission measurement - Measurement of aliphatic and aromatic aldehydes and ketones by DNPH method - Cartridges method

13.1.2 Immission measurement (without sampling)

VDI 2267 sheet 14 2003-12	Determination of suspended matter in ambient air - Measurement of Al, As, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Na, Ni, Pb, V, Zn as part of dust deposition by optical emission spectrometry (ICP OES)
VDI 2267 sheet 15 2005-11	Determination of suspended matter in ambient air - Measurement of the mass concentration of Al, As, Ca, Cd, Co, Cr, Cu, K, Mn, Ni, Pb, Sb, V, Zn as part of dust precipitation by mass spectrometry (ICP-MS)
VDI 2100 sheet 2 2001-06	Determination of gaseous compounds in ambient air; Determination of indoor air pollutants - Gas chromatographic determination of organic compounds - Active sampling by accumulation on activated charcoal; Solvent extraction
DIN ISO 12884 2000-12	Ambient air - Determination of total (gas and particle phase) polycyclic aromatic hydrocarbons - Collection on sorbent-backed filters with gas chromatographic/mass spectrometric analysis
DIN EN 14662-2 2005-08	Ambient air quality - Standard method for measurement of benzene concentrations - Part 2: Pumped sampling followed by solvent desorption and gas chromatography
DIN EN 14662-5 2005-08	Ambient air quality - Standard method for measurement of benzene concentrations - Part 5: Diffusive sampling followed by solvent desorption and gas chromatography

13.2 Indoor measurement

13.2.1 Determination of particulate and gaseous air polluting matters in indoor air

ASTM D 4861 2005-01	Standard Practice for Sampling and Selection of Analytical Techniques for Pesticides and Polychlorinated Biphenyls in Air
VDI 4300 sheet 2 1997-12	Indoor-air pollution measurement - Measurement strategy for polychlorinated biphenyls in conjunction with DFG Methode Nr. 1 "Chlorierte Biphenyle (PCB)"
QMA 2.516.200 1998-05	Determination of lindane, pentachlorophenol, pentachloroanisole and dichlofluamid in ambient air by gas chromatography in conjunction with: VDI 4300 Blatt 4
VDI 2100 sheet 2 2001-06	Determination of indoor air pollutants, Gas chromatographic determination of organic compounds, Active sampling by accumulation on activated charcoal, Solvent extraction
VDI 2100 sheet 3 2002-11	Determination of gaseous compounds in ambient air - Determination of indoor air pollutants - Gas chromatographic determination of organic compounds; Active sampling by accumulation on sorbents - Thermal desorption

Annex to the Accreditation Certificate DAP-PL-3911.00

DIN ISO 16000-3
2002-08 Indoor air, Determination of formaldehyde and other carbonyl compounds, Active sampling method

DIN ISO 16000-6
2004-12 Indoor air - Part 6: Determination of volatile organic compounds in indoor and test chamber air by active sampling on TENAX TA sorbent, thermal desorption and gas chromatography using MS/FID

in conjunction with:

*VDI 4300 Blatt 1
1995-12 Indoor-air pollution measurement - General aspects of measurement strategy
(Note: Document has been reviewed in and continues to be valid without modifications:
November 2002)*

*DIN EN ISO 16000-1
2006-06 Indoor air - Part 1: General aspects of sampling strategy*

*DIN EN ISO 16000-2
2006-06 Indoor air - Part 2: Sampling strategy for formaldehyde*

*DIN EN ISO 16000-5
2007-05 Indoor air - Part 5: Sampling strategy for volatile organic compounds (VOCs)*

13.2.2 Determination of microbiological ingredients indoors

QMA 2.516.105
006-09 Determination of the concentration of airborne germs content in supply air of ventilation and air-conditioning systems in offices and assembly rooms according to VDI-Richtlinie 6022-1 (2006-04)

VDI 6022 sheet 2
2007-07 Hygienic requirements for ventilation and air-conditioning systems - Measurements procedures and examinations in hygiene check-ups and hygiene inspections

VDI 4300 sheet 10
2008-07 Measurement of indoor air pollution - Measurement strategies for determination of mould fungi in indoor environment without clause 4.3 (Analysis of house dust) and 4.4.2.2 (analysis of the total number of spores)

in conjunction with:

*Technische Regeln für
Biologische Arbeits-
stoffe
TRBA 405
2001-05 Anwendung von Messverfahren und
technischen Kontrollwerten für luft-
getragene Biologische Arbeitsstoffe*

*DIN 1946-4
2008-12 Ventilation and air conditioning - Part 4:
Ventilation in buildings and rooms of health
care*

*VDI-Richtlinie 6022
Sheet 1
2006-04 Hygienic requirements for ventilating and
air-conditioning systems and air-handling
units*

13.3 Measurement of dangerous substances at the workplace

Group 1 Aerosole (without fibre dust)	Standard-titel	SRM	QM-Dokument
Component			QMA
<u>A-dust</u>	Alveolengängiger Staubanteil	BGIA Nr. 6068 2003-10	2.543.010 2.543.013
<u>E-dust</u>	Einatembarer Staubanteil	BGIA 7284 2003-10	2.543.009 2.543.013
<u>Wood dust</u>	Holzstaub	BGI 505-41 2006-10	2.543.016 2.543.013
<u>Metals</u>	Workplace air - Determination of metals and metalloids in airborne particulate matter by inductively coupled plasma atomic emission spectrometry	ISO 15202 chapter 1 - 3 2004-11	2.543.011 2.516.017 2.516.031
<u>Mercury</u>	Mercury	NIOSH 6009 1994-08	2.543.012 2.516.012 2.516.017
<u>Chromate</u>	Chromate	BIA 6665 2006-10	2.543.011 2.516.468
<u>Weld smoke</u>	Schweißrauch	BGIA 8586 2006-10	2.543.011
<u>DME</u>	Dieselmotoremissionen (only samplly)	BGI 505-44 1995-06	2.543.014
<u>Crystalline mineral dust</u>	Quartz (only samplly)	BGIA 8522 2005-04	2.543.028

Group 3 Inorganic gases and vapours	Standard-Titel	SRM	QM-Dokument
Component			QMA
<u>Halogens</u>	Chlorine	NIOSH 6011	2.543.032 2.543.025
<u>Halogen halide and other inorganic acids</u>	Chlorwasserstoff	BGIA 6610 2007-04	2.543.012 2.516.469
	Fluorwasserstoff und Fluoride	BGIA 7512 2006-05	2.543.033 2.516.469
	Salpetersäure	BGIA 8562 2007-04	2.543.035 2.516.469
	Schwefelsäure Aerosol oder gasförmig	BGIA 8580 2007-04	2.543.034 2.516.469
<u>Other volatile hydrides</u>	Ammonia	NIOSH 6015 1994-08	2.543.027 2.516.439

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Group 3 Inorganic gases and vapours	Standard-Titel	SRM	QM-Document
Component			QMA
<u>Non-metal oxides</u>	Distickstoffmonoxid (Lachgas)	1. BGIA 9050 Dräger- Hausmethode 1 2. Multigas- monitor	2.543.036 2.543.015
	Nitrogen dioxide	NIOSH 6014-1 1994-08	2.543.019 2.543.026
	Nitrogen monoxide	NIOSH 6014-1 1994-08	2.543.019 2.543.026
	Carbon monoxide	NIOSH 6604 1996-05	2.543.015

Group 4 Organic gases and vapours	Standard-titel	SRM	QM-Document
Component			QMA
<u>Simple solvents (aliphatics, aromatics, VOH, ketones, ester</u>	Hydrocarbons	NIOSH 1500 2003-03	2.543.012 2.516.229
	Hydrocarbons, aromatic	NIOSH 1501 2003-03 BGI 505-4 1992-10	2.543.012 2.516.229
	Hydrocarbons, halogenated	NIOSH 1003 2003-03	2.543.012 2.516.229
	Anaesthetic gases	Dräger- In-house method 2	2.543.036
	Ketones I + II	NIOSH 2553 2003-03 NIOSH 2555 2003-03	2.543.012 2.516.229
	Ester I	NIOSH 1450 2003-03	2.543.012 2.516.229
	<u>Alcohols</u>	Alcohols I (Ethanol, Isopropanol)	NIOSH 1400 1994-08
Alcohols II (Butanol, all isomers)		NIOSH 1401 1994-08	2.543.012 2.516.229
<u>Aldehyde</u>	Aldehyde	BGIA 6045 2007-11	2.543.012 2.516.307
<u>Organic acids</u>	Ameisensäure	BGIA 6070 1993-10	2.543.012 2.516.304
	Essigsäure	BGIA 7320 1993-10	2.543.012 2.516.304

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Group 5 Selected parameters	Standard-titel	SRM	QM-Document
Component			QMA
<u>N-nitrosamine</u>	N-Nitrosamine (nur Probennahme)	BGI 505-23	2.543.021
<u>Cooling lubricant</u>	Kühlschmierstoffe (nur Probennahme)	BGIA 7750 1997-11	2.543.037

The listed methods meet the „Grundsätzlichen Anforderungen an akkreditierte Messstellen zum Vollzug des Gefahrstoffrechts“ (LASI-Veröffentlichung LV 2.2, updated September 2005). Combined with the examination of propounded test reports in adequate number for each group, for

Group 1

Group 3

Group 4

Group 5 (Nitrosamines and cooling lubricants, only sampling)

the competence is approved for the determination and evaluation of the concentration of hazardous substances in the air at the workplace according to Gefahrstoffverordnung § 9, Abs. 6 und Anhang III, Nr. 2.

abbreviations used:

ANSI	American National Standards Institute
AQS	Analytische Qualitätssicherung Baden-Württemberg
ASTM	American Society for Testing and Materials
BGI	Berufsgenossenschaftliche Information
BGIA	Berufsgenossenschaftliches Institut für Arbeitsschutz
BIFMA	The Business and Institutional Furniture Manufacturer's Association
BS	British Standard
BVL	Bundesamt für Verbraucherschutz und Lebensmittelsicherheit
CFR	Code of Federal Regulations
CPSC	Consumer Product Safety Commission
DEV	Deutsche Einheitsverfahren der Wasseruntersuchung
DFG	Deutschen Forschungsgemeinschaft
DIN	Deutsches Institut für Normung e.V.
EN	Europäische Norm
EPA	Environmental Protection Agency, USA
GGTM	Greenguard Test Method
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
LAWA	Landesarbeitsgemeinschaft Wasser
NIOSH	National Institute for Occupational Safety and Health
QMA	Qualitätsmanagement Arbeitsanweisung
RL	Richtlinie
TRBA	Die Technischen Regeln für Biologische Arbeitsstoffe
TrinkwV	Trinkwasserverordnung
VDA	Verband der Automobilindustrie
VDI	Verein Deutscher Ingenieure
VdL	Verband der Deutschen Lackindustrie e. V.

Authorised to sign **all** listed test areas are:

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Dr. rer. nat. Karl Sander Graduate chemist
Dr. rer. nat. Michael von Pidoll Graduate geologist

Authorised to sign the following test areas are:

Listing of test areas

- 1 Analyses of water, drinking water, wastewater, sludge, sediments
- 2 Analyses of soil, contaminated soil, waste and residues
- 3 Analyses of petroleum, petroleum products and solid fuels
- 3.1 Testing of candles
- 4 Analyses of steel and ferrous materials
- 5 Analyses of synthetic fibres, textile and leather products
- 6 Analyses of toys
- 6.1 Mechanical testing
- 6.2 Chemical analyses
- 7 Analyses of commodities with contact to foodstuffs respectively mucous membrane (plastic, paper, glass, ceramic, silicone, elastomer, metallic products with contact to foodstuffs)
- 7.1 Microbiological analyses
- 7.2 Chemical analyses
- 8 Analyses of cosmetics, washing agents and detergents
- 8.1 Microbiological analyses
- 8.2 Chemical analyses
- 9 Emission chamber testing (e.g. vehicle interior materials, furniture, printer)
- 10 Other materials (e.g. paint, varnish, ink, indirect material)
- 11 Air-transported pollutants
- 11.1 Microbiological analyses
- 11.2 Chemical analyses
- 12 Determination of inorganic fibrous particulates in air
- 13 Workplace measurement
- 14 Samplers within the TVO
- 15 Selected parameters

Azil, Laila	BTA	1, 14
Bandel, Klaus	Graduate engineer chemistry	15
Bier, Gunther	Graduate engineer chemistry	5, 6, 7, 10
Blöse, Heike	Chemical laboratory worker	15
Bohnstengel, Andre	Chemical laboratory worker	1, 10, 11, 12
Böger, Bernhard	Graduate geologist	1, 2, 10, 11, 12
Braun, Susanne	CTA	15
Brieskorn, Annett	Chemical laboratory worker	15
Brill, Frank	Chemical technician	1, 10, 11, 12
Dr. Clemens, Markus	Graduate chemist	1-5, 9, 10, 11
Dr. Dormagen, Walter	Graduate chemist	1, 2, 10, 11, 12, 13
van Dyck, Petra	Foreign language correspondence clerk / Data processing merchant	5

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Espelöer, Wolfgang	Graduate chemist	13
Dr. Gorzawski, Beate	Graduate chemist	1-5, 6.2, 9, 10, 11
Dr. Halbach, Eva	Graduate chemist	15
Haller, Angelika	Chemical laboratory worker	15
Holz, Helmut	Graduate geologist	5, 6, 7, 10
Dr. Horlemann, Norbert	Graduate chemist	1, 2, 10, 11, 12, 13
Holtwessels, Bernhard* ¹	Plant engineer	1, 10, 11, 12, 13
Jacobs, Petra	Chemical laboratory worker	15
Kaiser, Klaus	Food chemist	1, 4, 7, 8
Dr. Kämmerer, Ralf	Graduate biologist	1, 7.1, 8.1, 10, 11, 12
Karger, Ansgar	Graduate lumberjack	1, 10, 11, 12
Koch, Björn	Industry foreman (chemistry)	1, 2, 10, 11, 12
Krewer, Johann	Graduate engineer (FH)	1, 10, 11, 12
Dr. Kuroпка, Gryta	State examination, teaching post chemistry	15
Dr. Mainusch-Respondek	Graduate chemist	15
Dr. Larsen, Patrick	Graduate chemist	15
Mickley, Inga	Food chemist	1, 4, 7, 8
Mishra, Sandra	Food chemist	1, 4, 7, 8
Metzger, Andreas	Graduate engineer textile technology	1-10, 11.1
Özel, Kadir	Toolmaker	6.1
Prasse, Margot	Graduate engineer textile technology	5
Reimer, Janina	Graduate engineer textile technology	5
Reiners, Christiane	Graduate engineer textile technology	7
Dr. Saran, Horst* ¹	Graduate chemist	1
Bernd Schiffarth	Graduate geologist	5
Schmickler, Karin	Chemical laboratory worker	15
Schöneich, Sandra	Graduate engineer economics / textile technology	5
Schwarz, Evelyn	Graduate biologist	1, 7.1, 8.1, 10, 11, 12, 14
Dr. Seipold, Lars	Graduate chemist	15
Dr. Tarlowski, Petra	Graduate chemist	1
Thiemann, Andreas	Certified engineer mechanical engineering	6.1
Trautwein, Annette	Laboratory worker	15
Dr. Wennemer, Ansgar	Graduate chemist	1-10, 11.1
Dr. Withopf, Peter	Graduate chemist	1-10, 11.1

*¹ retired, acts from time to time as freelancer