SCOPE OF ACCREDITATION TO ISO/IEC 17043:2023

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PROFICIENCY TESTING PROVIDER

Valid To: March 31, 2028 Certificate Number: 5494.01

In recognition of the successful completion of the A2LA evaluation process, this proficiency testing provider has been found to meet the ISO/IEC 17043:2023, "Conformity assessment-General Requirements for Proficiency testing". Accreditation is granted to this provider to provide proficiency testing samples in the following programs:

I. Physical, Physical-Chemical and Chemical Analysis

MATRIX	FREQUENCY	PARAMETERS	PROFICIENCY TESTING SCHEMES[2]
Foodstuff	At least once a year	Ingredients Additives Residues Contaminants Acidity/pH value Specific Weight/density Freezing point Viscosity DNA/GMO	UHT milk, Soft cheese, Boiled sausage, Fruit preparation, Energy drink, Egg products, Mycotoxins in corn, Mineral oil in low-fat and starch-rich foodstuff, Perfluorinated compounds in baby food

MATRIX	FREQUENCY	PARAMETERS	PROFICIENCY TESTING SCHEMES[2]
Animal feed/food	At least once a year	Ingredients Additives Residues Contaminants	Ingredients animal feed, Fluoride content in animal feed, Perfluorinated compounds in feed
Consumer goods with body contact and cleansing agents, their raw and starting materials and intermediate products	At least once a year	Ingredients Additives Residues Contaminants Migration analysis Extraction analysis Identification Identification via Microscopy Acidity/pH value Specific weight/density Color fastness Metals/heavy metals Dyes Mineral oil constituents Fragmentation and degradation products Flame retardants Microscopy DNA/GMO	Textiles - extractable metals (EN 16711-2), Textiles - perfluorinated compounds, Tattoo ink - aromatic amines, Cosmetics - heavy metals (ISO 21392), Care products, Finger paint - NDELA (EN 71-12)

MATRIX	FREQUENCY	PARAMETERS	PROFICIENCY TESTING SCHEMES[2]
Consumer goods with food contact and their raw and starting materials and intermediate products	At least once a year	Ingredients Additives Residues Contaminants Migration analysis Extraction analysis Identification Identification via Microscopy Acidity/pH value Specific weight/density Color fastness Metals/heavy metals Dyes Mineral oil constituents Printing inks and printing ink constituents	Plastic - overall migration (total immersion) (EN 1186-3), Plastic - Specific migration caprolactam, Mineral oil in cardboard, Paper, cardboard - formaldehyde (EN 1541)

II. Sensory Analysis

MATRIX	FREQUENCY	PARAMETERS	PROFICIENCY TESTING SCHEMES[2]
Foodstuff	At least once a year	Appearance Texture Consistency Mouth feel Smell Taste Trigeminal sensations Aroma Flavor	Water (ranking test, basic tastes), Yoghurt (triangle test, flavor), Chocolate (simple descriptive testing), Drinking water TON, TFN, Water quality according to DIN EN 1622, Chocolate (profile testing)

MATRIX	FREQUENCY	PARAMETERS	PROFICIENCY TESTING SCHEMES[2]
Consumer goods with food contact	At least once a year	Appearance Texture Consistency Mouth feel Smell Taste Trigeminal sensations Aroma Flavor	Sensory testing of food contact materials and articles (FCM) (DIN 10955), Sensory testing of board and paper acc. to EN 1230

III. Cultural microbiological analysis including differentiation, also with PCR and other methods

MATRIX	FREQUENCY	PARAMETERS	PROFICIENCY TESTING SCHEMES[2]
Foodstuff	At least once a year	Bacteria Yeasts Molds	E.coli milk, EHEC O157 milk, Staphylococcus cheese, Yeasts milk powder, Molds fruit preparation Aerobic total count mineral water, Pseudomonas aeruginosa mineral water
Animal feed	At least once a year	Bacteria	Clostridia animal feed, Salmonella spp. animal feed
Consumer goods with body contact	At least once a year	Bacteria Yeasts Molds Sterility	Molds O/W Emulsion, C. albicans (ATCC 10231) O/W Emulsion, Aerobic bacteria in tattoo ink, challenge test O/W-emulsion, Antibacterial activity of textiles - ISO 20743

MATRIX	FREQUENCY	PARAMETERS	PROFICIENCY TESTING SCHEMES[2]
Medical devices	At least once a year	Bacteria Yeasts Molds Sterility	Testing for sterilization of medical devices (ISO 11737-1)
Disinfectants	At least once a year	Bactericidal activity Fungicidal/levurocidal activity Mycobactericidal/tuberculocidal activity Sporicidal activity Virucidal activity	Bactericidal activity (phase 2 / step 1-test), EN 13727 EN 1276, Fungicidal / Levurocidal activity, EN 13624, EN 1650 Virucidal activity (chemical disinfectant, phase 2 / step 1-test)
Consumer goods with food contact	At least once a year	Bacteria Yeasts Molds Sterility	Molds foil packaging, Mesophilic sterility testing of tinned food
Re-cooling Water	At least once a year	Bacteria Yeast Molds	Legionella, Pseudomonas aeruginosa, Total Count

IV. Mechanical Testing

MATRIX	FREQUENCY	PARAMETERS	PROFICIENCY TESTING SCHEMES[2]
Plastics and plastic products	At least once a year	Tensile properties Flexural properties Compressive properties Impact properties Tear resistance Compression set Creep behavior Dynamic-mechanical characteristics Puncture impact behavior Tear resistance Steam jet test Multi stone impact	Tensile test - ISO 527-2 - ASTM D638 - ISO 1798 (foams) - ISO 527-3 (films / geosynthetics) - ISO 527-4/-5 (composites) - ISO 14129 (composites) Tensile creep test ISO 899-1 Flexural test - ISO 178 - ASTM D790 - ISO 14125 (composites) - DIN 53435 (Dynstat) Shear strength ISO 14130 Compression test - ISO 604 (plastic) - ISO 14126 (composites) Compression set foams ISO 1856 Impact test (notched / un notched): - ISO 179 (Charpy) - DIN 53435 (Dynstat) - ISO 180 (Izod) - ASTM D256 (Izod) DMA ISO 6721-5 Instrumented puncture impact test - ISO 6603-2 - ASTM D3763 Static puncture test - ISO 12236 - ASTM D4833 Steam jet test DBL 5416 | ISO 16925 Impact resistance – free falling dart ISO 7765-1 Tear resistance - ISO 6383-1 (Trouser tear) - ISO 6383-2 (Elmendorf) Multiple stone impact test DBL 5416 | ISO 20567-1

MATRIX	FREQUENCY	PARAMETERS	PROFICIENCY TESTING SCHEMES[2]
Textile and textile products	At least once a year	Tensile properties Tear resistance	Tensile properties - ISO 13934-1 (strip method) - ISO 13934-2 (grab method) Tear properties - ISO 13937-1 (Elmendorf) - ISO 13937-2 (trouser shaped) - ISO 13937-3 (wing shaped) Tensile test ISO 1421
Rubber	At least once a year	Tensile properties Tear resistance Compression set Tension set	Tensile test - ISO 37 - ASTM D412 Tear resistance ISO 34, Trouser/angle test piece, Compression set ISO 815-1/-2, Tensile set ISO 2285
Leather	At least once a year	Tensile properties Tear load	Tensile test ISO 3376, Tear load – single edge tear ISO 3377-1, Tear load – double edge tear ISO 3377-2
Building materials	At least once a year	Compressive strength Flexural strength	Hardened concrete- Compressive strength EN 12390-3, Hardened concrete - Flexural strength EN 12390-5, Cement - Strength EN 196-1, Screed materials - Flexural and compressive strength EN 13892-2, Mortar – flexural and compressive strength EN 1015-11
Insulating materials	At least once a year	Dynamic stiffness	Acoustics determination of dynamic stiffness EN 29052-1
Metals	At least once a year	Tensile properties Impact properties	Tensile test, round specimen ISO 6892-1, Tensile test, flat specimen ISO 6892-1, Charpy impact test ISO 148-1

V. Thermal Testing/Burning Behavior

MATRIX	FREQUENCY	PARAMETERS	PROFICIENCY TESTING SCHEMES[2]
Plastic and plastic products	At least once a year	Melting point and enthalpy Glass transition temperature Oxidation induction time (OIT value) Filler content Black carbon content Dispersion of black carbon Coefficient of linear thermal expansion Softening temperature Heat deflection temperature (HDT) Burning rate/behavior Glow wire ignition temperature (GWIT)	DSC-Analysis – melting point and enthalpy -ISO 11357-3 -ASTM D3418 DSC-Analysis – glass transition temperature -ISO 11357-2 -ASTM D3418 DSC-Analysis – oxidation induction time -ISO 11357-6 -ASTM D3895 Thermogravimetry (TGA) – filler content - ISO 11358 Black carbon content geosynthetics -ISO 11358 -ASTM D4218 -ASTM D5596 Linear thermal expansion ISO 11359 Vicat softening temperature -ISO 306 -ASTM D1525 Heat deflection temperature -ISO 75 -ASTM D648 Burning behavior -FMVSS302 / DIN 75200 -UL 94 V / HB Burning behavior foams -FMVSS 302 / DBL 5307 Glow wire test EN 60695-2-13
Textiles and textile products	At least once a year	Melting point and enthalpy Burning rate	DSC-Analysis (woven goods) ISO 11357-3 Burning rate textiles FMVSS 302 / DIN 75200
Elastomers	At least once a year	Glass transition temperature Black carbon content	DSC-Analysis – glass transition temperature ISO 11357-2 Thermogravimetry (TGA) – black carbon content ISO 11358
Leather	At least once a year	Burning rate	Leather – burning rate FMVSS 302 | DBL 5307

VI. Hardness Testing

MATRIX	FREQUENCY	PARAMETERS	PROFICIENCY TESTING SCHEMES[2]
Plastic and plastic products	At least once a year	Hardness	Hardness Shore D ISO 868, Ball indentation hardness ISO 2039-1, Hardness foams ISO 2439 / ASTM D3574, Compression stress value foams ISO 3386-1 / DBL 5452, Barcol hardness EN 59 / ASTM D2583
Rubber	At least once a year	Hardness	Hardness Shore A, ISO 868 / ISO 7619 / ISO 48, Hardness Shore A ASTM D2240, IRHD-Hardness (method M) ISO 48, IRHD-Hardness (method N) ISO 48
Metals	At least once a year	Hardness	Hardness testing Brinell ISO 6506-1, Hardness testing Vickers ISO 6507-1, Hardness testing Rockwell ISO 6508-1

VII. Density/Mass per Unit Area

MATRIX	FREQUENCY	PARAMETERS	PROFICIENCY TESTING SCHEMES[2]
Plastic and plastic products	At least once a year	Density Apparent density	Density ISO 1183-1, Density ASTM D792, Apparent density (foams) ISO 845
Textiles and textile products	At least once a year	Mass per unit area/ gram	Mass per unit area EN 12127, ISO 3801
Rubber	At least once a year	Density	Density ISO 2781
Hardened Concrete	At least once a year	Density	Density EN 12390-7
Mortar	At least once a year	Dry bulk density	Dry bulk density EN 1015-10

VIII. Rheological Properties

MATRIX	FREQUENCY	PARAMETERS	PROFICIENCY TESTING SCHEMES[2]
Plastics and plastic products	At least once a year	Melt flow rate (MFR) Melt volume rate (MVR) Solution viscosity Viscosity number Fluidity Apparent viscosity Complex shear viscosity (storage modulus, loss modulus, viscosity)	Melt index MFR/MVR - ISO 1133 - ASTM D1238 Viscosity number ISO 307 sulfuric acid - m-cresol - formic acid, Viscosity number of PBT ISO 1628-5, Fluidity – capillary rheometer ISO 11443, Parallel plate rheometer ISO 6721-10
Rubber	At least once a year	Mooney Viscosity	Mooney viscosity ISO 289-1

IX. Optical Testing/Surface Testing

MATRIX	FREQUENCY	PARAMETERS	PROFICIENCY TESTING SCHEMES[2]
Plastics and plastic products	At least once a year	Gloss level Color measurement Abrasion Erichsen-Hardness Scratch resistance Contact angle and surface energy Roughness measurement - contact free - profile method Transparency/haze Cross cutting Micropores/microcracks Color difference	Gloss reading ISO 2813, Color measurement 8°/ 45° ΔE, ΔL, Δa, Δb DIN 53236/ISO 7724, Scratch resistance PV 3952, Erichsen-Hardness pencil ISO 1518, Contact angle surface energy DIN 55660-2, Roughness ISO 4287/ISO 25178-2, Roughness ISO 4287/ ISO 4288, Abrasion by abrasive wheels ISO 9352, Transparency – haze ISO 14782, Cross cutting test ISO 2409, Number of micropores / microcracks in chromium coating DIN 53100, Color difference on color charts using the grey scale ISO 105 A02 / A03

MATRIX	FREQUENCY	PARAMETERS	PROFICIENCY TESTING SCHEMES[2]
Textiles and textile products	At least once a year	Color measurement Whiteness measurement	Colorimetry of textiles ΔE, ΔL, Δa, Δb Whiteness measurement according to Ganz

X. Environmental Simulation

MATRIX	FREQUENCY	PARAMETERS	PROFICIENCY TESTING SCHEMES[2]
Plastics and plastic products	At least once a year	Light fastness Sunlight simulation Stress cracking Exposure to laboratory light sources Environmental cycle	Light fastness - ISO 105-B06 - ISO 4892 - ASTM G155 Sunlight simulation DIN 75220 Exposure to light – UV lamps - ISO 4892-3 - ASTM G154 Environmental stress cracking DIN EN 14576/ ASTM D5397 Environmental cycle test PV 1200
Aluminum wheels, reference specimens, painted metal plates	At least once a year	Corrosion testing Resistance to humidity	Aluminum wheels – corrosion testing (Filiform and CASS) DBL 7381, Corrosion testing ISO 9227, Corrosion testing ASTM B 117, Condensation atmosphere constant humidity (CH) ISO 6270

XI. Permeation

MATRIX	FREQUENCY	PARAMETERS	PROFICIENCY TESTING SCHEMES[2]
Plastics and plastic products	At least once a year	Water vapor transmission rate Gas transmission rate	Water vapor transmission rate ISO 15106-3 Gas transmission rate ISO 15105-2

XII. Water Content, Water Absorption

MATRIX	FREQUENCY	PARAMETERS	PROFICIENCY TESTING SCHEMES[2]
Plastics and plastic products	At least once a year	Water content Water absorption	Water content (Karl-Fischer) ISO 15512 Water content (Aquatrac®) Water absorption ISO 62
Insulating material	At least once a year	Heat transfer Water absorption coefficient	Thermal performance of building materials EN 12667, Hygrothermal performance of building materials ISO 15148

XIII. Thickness Measurement

MATRIX	FREQUENCY	PARAMETERS	PROFICIENCY TESTING SCHEMES[2]
Plastics and plastic products	At least once a year	Thickness	Film Thickness ISO 4593, Thickness at specified pressures ISO 9863-1, Coating thickness of electroplated plastics ISO 1456 / EN 16866 / ASTM B764
Textiles and textile products	At least once a year	Thickness	Thickness of nonwovens ISO 9073-2, Thickness ISO 2286-3
Leather	At least once a year	Thickness	Thickness of leather ISO 2589

XIV. Other Physical Properties

MATRIX	FREQUENCY	PARAMETERS	PROFICIENCY TESTING SCHEMES[2]
Plastics and plastic products	At least once a year	Physical properties	Coefficients of friction (films) ISO 8295, Dimensional stability EN 1107-2, Resistance to internal pressure ISO 1167-1/-2, Ring stiffness (pipes) ISO 9969, Sealed-seam strength (films) DIN 55529, Adhesion of multilayer pipes ISO 17454, Ash content ISO 1172, Quantitative infrared spectroscopy
Rubber	At least once a year	Physical properties	Rebound resilience ISO 4662 | DIN 53512, Abrasion ISO 4649, Increase in mass ISO 1817, Solvent extract of rubber ISO 1407

XV. Other chemical Properties

MATRIX	FREQUENCY	PARAMETERS	PROFICIENCY TESTING SCHEMES[2]
Building materials	At least once a year	Chloride content Reactive CaO Total organic carbon Loss of ignition	Hardened concrete – Chloride content EN 14629, Cement - Chloride content EN 196-2, Cement – loss of ignition EN 196-2, Screed mortar – mass percentage of reactive CaO EN 450-1

XVI. Color Fastness Testing

MATRIX	FREQUENCY	PARAMETERS	PROFICIENCY TESTING SCHEMES[2]
Textiles and textile products	At least once a year	Fastness to light Fastness to washing Fastness to dry cleaning Fastness to water Fastness to perspiration Fastness to rubbing Fastness to hot Pressing Fastness to organic solvents Fastness to dry heat	Color fastness to light ISO 105-B02 and B04, Color fastness to washing ISO-C06 and C08, Color fastness to dry cleaning ISO 105-D01, Color fastness to water ISO 105-E01, Color fastness to perspiration ISO 105-E04, Color fastness to rubbing – Crockmeter ISO 105-X12, Color fastness to sea water ISO 105-E02, Color fastness to chlorinated water ISO 105-E03, Color fastness by dry heat ISO 105-P01, Color fastness to organic solvents ISO 105-X05, Color fastness to hot pressing ISO 105-X11

XVII. Functional Properties and Fabric Properties

MATRIX	FREQUENCY	PARAMETERS	PROFICIENCY TESTING SCHEMES[2]
Textiles and textile products	At least once a year	Functional properties	Permeability to air ISO 9237, Demand absorbency ISO 9073-12, Dimensional change in washing ISO 5077/ ISO 6330, Hydrostatic pressure test ISO 811, Thermal and water vapor resistance ISO 11092, Industrial washing and color change ISO 15797, Flexure resistance (flexometer) ISO 32100, Resistance to damage by flexing ISO 7854 Oil repellency ISO 14419
Textiles and textile products	At least once a year	Fabric properties	pH value ISO 3071, Abrasion resistance – Martindale ISO 12947-2, Pilling properties (pilling box) ISO 12945-1, Pilling properties (Martindale) ISO 12945-2, Bursting strength and bursting distension ISO 13938-2, Slippage resistance of yarns ISO 13936-1/-2, Construction of fabric, Maximum force seam ISO 13935-1

XVIII. Determination of Fiber Blends

MATRIX	FREQUENCY	PARAMETERS	PROFICIENCY TESTING SCHEMES[2]
Textiles and textile products	At least once a year	Quantitative determination of fiber blends Qualitative determination of fiber blends	Quantitative determination of a fiber blend ISO 1833: Cotton/Polyester/Acrylic/Protein/Viscose/Polyamide fibers Qualitative determination of a fiber blend

XVIX. Emission Testing

MATRIX	FREQUENCY	PARAMETERS	PROFICIENCY TESTING SCHEMES[2]
Non-metallic material of vehicle interiors	At least once a year	Odor test Formaldehyde emission Total carbon Emission Fogging behavior	Odor test VDA 270 – PV 3900, Formaldehyde emission VDA 275 – PV 3925, Total carbon emission VDA 277 – PV 3341, Fogging method A DIN 75201, Fogging method B DIN 75201 – PV 3015

[1] Assigned values and associated uncertainties determined via participant consensus values.

[2] Named PT schemes are examples of schemes provided by the proficiency testing provider that fall within the listed parameters. The PTP is deemed competent to provide similar schemes that fit within the listed parameters and these schemes are also included in the scope of accreditation.

Accredited Proficiency Testing Provider

A2LA has accredited

DEUTSCHES REFERENZBURO FUR RINGVERSUCHE UND REFERENZMATERIALIEN GmbH (DRRR GmbH)

Kempten, GERMANY

This accreditation covers the specific proficiency testing schemes listed on the agreed upon Scope of Accreditation. This provider is accredited in accordance with the recognized International Standard ISO/IEC 17043: 2023 *Conformity assessment - General requirements for proficiency testing*. This accreditation demonstrates technical competence for a defined scope and the operation of a quality management system.

Presented this 20th day of May 2024.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 5494.01
Valid to March 31, 2028

For the proficiency testing schemes to which this accreditation applies, please refer to the provider's Scope of Accreditation.