



**Southeast Asia
Accreditation Body**

CERTIFICATE OF ACCREDITATION

The Southeast Asia Accreditation Body

Hereby attests that

LPDR Laboratory Service Co., Ltd.

**138 Rue Nokeokoumane, 02423 Vientiane,
Lao People's Democratic Republic**

Fulfills the requirements of

ISO/IEC 17025:2017

In the field of

TESTING

This certificate is valid only when accompanied by a current scope of accreditation document.
The current scope of accreditation can be verified at <https://sa-accreditation.com>

Rathana Xiong, Vice President

Issued Date: 01 April 2023

Expiry Date: 30 April 2028

Certificate Number: 763862



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory
quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

LPDR Laboratory Service Co., Ltd.

138 Rue Nokeokoummane, 02423 Vientiane,
Lao People's Democratic Republic

info@certificationlao.com

TESTING

Valid to: April 30, 2028

Certificate Number: 763862

Acoustics

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
<u>Hearing Protection Devices</u>			
Acoustic performance, including physical characteristics	EN 352-1	Ear-muffs	Anechoic room, Reverberation room, Acoustic duct, Acoustic analyzer, Sound level calibrator, Amplifiers, preamplifiers and loudspeakers, Microphones, FM and Bluetooth transmitters, Graphic equalizer, Acoustic test fixtures, Earmuff cycling rigs, Fit and Force Rig, Thermocouple rod, Earplug gauge plate, Audiometer, Hygrometer, Balance, Headforms, Masses, Steel rules and tape measures, Planimeter, Timers,
	EN 352-2	Ear-plugs	
	EN 352-3	Industrial safety helmet mounted ear-muffs	
	EN 352-4 (Note 1)	Level dependent ear-muffs	
	EN 352-5 (Note 1)	Active noise reduction ear-muffs	
	INSPEC internal procedure TP 1 H023 based on EN 352-5, Section 5 (adapted to cover ear-plugs)	Active noise reduction ear-plugs	
	EN 352-6 (Note 1)	Ear-muffs with electrical audio input	
	INSPEC internal procedure TP 1 H023 based on EN 352-6, Section 5 (adapted to cover ear-plugs)	Ear-plugs with electrical audio input	
	EN 352-7 (Note 1)	Level dependant ear-plugs	
	EN 352-8 (Note 1)	Entertainment audio ear-muffs	



Southeast Asia
Accreditation Body

Acoustics

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
	INSPEC internal procedure TP 1 H023 based on EN 352-8, Section 5 (adapted to cover ear-plugs)	Entertainment audio ear-plugs	Calibrated drops, Steel plates, Freezer, Gauge Sticks, Laser plumb bob, Water Bath, Plane parallel spacers
Physical characteristics	EN 13819-1	Ear-muffs and ear-plugs	
Acoustic performance	EN 13819-2	Ear-muffs and ear-plugs	
Sound attenuation of hearing protectors (Subjective measurements)	ISO 4869-1	Ear-muffs and ear-plugs	

Chemical / Mechanical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
<u>Clothing and Hand Protection</u>			
Protective clothing	EN 6942		test method for assessing a material and a set of materials when exposed to a source of radiant heat
Plastic, Textile	FTIR (ASTM E168, E1252)		A material's absorbance of infrared light at different frequencies produces a unique "spectral fingerprint" based upon the frequencies at which the material absorbs infrared light and the intensity of those absorptions. The resulting spectral scan (absorbance or transmittance) is usually specific to a general class of material.



Southeast Asia
Accreditation Body

Leather	BS2780		Test on leather tom specify
Textile	ISO 3801		Determination of mass per unit length and mass per unit area
Protective clothing	EN 20811 EN 31092		Determination of resistance to water penetration - Hydrostatic pressure test, Measurement of thermal and water-vapour resistance under steady-state conditions
Protective clothing	EN 367		Test method for comparing the heat transmission through materials or material assemblies used in protective clothing. Materials are ranked by calculation of a Heat Transfer Index, which is an indication of the relative protection under the specified test conditions.
Protective clothing	EN 702		Protection against heat and flame. Test method. Determination of the contact heat transmission through protective clothing or its materials



Southeast Asia
Accreditation Body

Protective clothing	EN 469; EN1149:		Test that is used during firefighting procedures and associated activities. protect against electrostatic discharge in areas where there is a risk of explosion (ATEX Environments) such as petrochemical refineries and fuel distribution companies
Protective gloves for firefighters	EN 659 ISO15383		test methods for firefighters' protective gloves and applies only to gloves that protect the wearer's hands during normal firefighting operations (e.g., search and rescue). While these gloves are not intended for the deliberate handling of liquid chemicals, they do provide some protection against accidental contact. there is a risk of heat and/or flame.
Breakthrough and chemical permeation	EN 16523-1; EN-16523-2; EN374-3 (withdrawn)	Protective gloves or clothing	Pressure penetration test apparatus, Permeation test cells, Detectors and data, loggers including gas chromatograph and spectrophotometer, Thickness test rig, Timers, Balances, Rule, Thermometers, Flowmeters, Water baths, Water leak test, Blade cut tester, Tensile and compression machine, Electrochemical detectors Abrasion tester, Inclined gutter method, Flammability test rig,
	ISO 6529; ISO 16602 Clauses 6.5, 7.5.3, 7.6.2, 7.7 and 7.8; ASTM F739; ASTM F1383 using GC/FID, PID, electrical conductivity, UV/Vis and electrochemical detectors		
Resistance to penetration of liquids under pressure	ASTM F903; ISO 13994; ISO 16602 Clauses 6.6 and 7.5.4.		



Southeast Asia
Accreditation Body

Chemical / Mechanical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Determination of pH (Non-leather gloves)	ISO 3071		Pressure gauge, Conditioning facilities, Thermo-hygrometer, Glove dexterity pins, Loading masses, Volumetric equipment, Pressure penetration test apparatus, Permeation test cells, Detectors and data, loggers including gas chromatograph and spectrophotometer, Thickness test rig, Timers, Balances, Rule, Thermometers, Flowmeters, Water baths, Water leak test, Blade cut tester, Tensile and compression machine, Abrasion tester Gutter test, Flammability test rig, Pressure gauge, Conditioning facilities, Thermo-hygrometer, Glove dexterity pins, Loading masses, Volumetric equipment, pH meter, Conductivity meter For chemical tests: A controlled list of challenge chemicals is maintained by the laboratory.
Mechanical resistance: Abrasion resistance, Blade cut resistance, Tear resistance, Puncture resistance	EN 388 not including EN 13997 ISO 23388 (excluding clause 4.2) ISO 13997		
Chemical and Dimensional: pH value, Sizing, Hand and glove measurement, Dexterity	EN 420 Clause 4.3.2, Clause 5.1, Clause 5.2; Clause 6.1 ISO 21420: 4.2 (c), Clause 5.1, Clause 6.1, Annex B		
Chemical protection – General requirements	EN 374-1		
Penetration water or air leak tests	EN 374-2		
Chemical permeation, excluding pre-conditioning	EN 943-1 Clauses 4.2 and 4.3; EN 934-2	Protective clothing against liquid and gaseous chemicals, including liquid aerosols and solid particles	
		Ventilated and non-ventilated “Gas tight” (Type 1) and “Non-gas-tight” (Type 2) chemical protective suits	
Resistance to penetration by liquids and liquid repellence	ISO 6530; ISO 16602 Clauses 6.8 and 6.9	Protective clothing against liquid chemicals	
	EN 13034 Clause 4.1	Protective clothing (Type 6 and Type PB [6]) against liquid chemicals	
Chemical permeation and penetration, excluding pre-conditioning (Clauses 4.2 and 5.2)	EN 14325 Clauses 4.11, 4.12, 4.13, 5.4.2 and 5.4.3	Test methods and performance classification of chemical protective clothing, materials, seams, joins and assemblages	



Southeast Asia
Accreditation Body

Chemical / Mechanical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Chemical permeation excluding pre-cleaning	EN 14605 Clauses 4.1 and 4.2	Clothing with Liquid-tight (Type 3) or Spray-tight (Type 4) connections, including items providing protection to parts of the body only (Types PB [3] and PB [4])	
Resistance to ignition	EN 14325 Clause 4.14; EN 1073-1 Clause 4.2; EN 1073-2 Clause 4.2; EN 943-1 Clause 4.2	Chemical protective clothing, materials, seams, joins and assemblages	TC thermometer, Gauge stick, Ruler, Timer
Resistance to flame	EN 14325 Clause 4.15; EN 943-2 Clause 5.1; ISO 16602:2007 Clause 6.16	Chemical protective clothing, materials, seams, joins and assemblages	TC thermometer, Gauge stick, Ruler, Manometer, Timer

Mechanical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
---	--	------------------------------------	-----------------------------

Foot Protection

Firefighter boots	EN 15090		test methods for the performance of three types of footwear used by firefighters for rescue purposes. Footwear for firefighters and, in general, for risks deriving from firefighting has the purpose of protecting the user's feet and legs from injuries or damage that may be caused during operations: crushing of the toes; impact of heavy objects on the toes; foot puncture for trampling on sharp objects; impacts in the heel area; contact with hot surfaces; contact of feet and legs with water and moisture;
Safety footwear	EN50321		tests for personal protective equipment such as insulating



Southeast Asia
Accreditation Body

			footwear and overboots protecting against electrocution during live work or in proximity of live parts of plants up to 36000 V AC or 25000 V DC. This PPE protects the user against electric shocks, preventing electricity from passing through the plantar arch
Safety footwear	ENISO 20345		Test to protect the wearer from bumps, crushing, falling or rolling objects, from walking into sharp or pointed objects, heat or cold, and hot substances

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
<u>Head Protection</u>			
Hoods for firefighters	EN13911		test methods for fire protection to be worn during rescue operations to protect against heat and fire
Mechanical performance, including flammability and physical characteristics	EN 397 Excluding: Very high temperature Molten metal splash	Industrial safety helmets	Drop towers for impact and penetration, Accelerometers, Load cells and highspeed data acquisition instruments, Drop masses, anvils strikers and penetration strikers,
	ANSI/ISEA Z89.1 Excluding: Electrical insulation Class E High visibility	Head protections	



Southeast Asia
Accreditation Body

Mechanical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Mechanical performance, including flammability and physical characteristics	AS/NZS 1801 Excluding: Shell conspicuity for special purposes, Retroreflective material, Ear-muffs and means of retention (compliance with original specification), Eye and face protection (compliance with original specification), Resistance to ignition of ear and neck protectors, Additional personal protective devices (compliance with original specification), Helmets intended for use in extreme high radiant heat environments	Occupational protective helmets	Retention System, Effectiveness and strength rigs, Lateral Deformation Test Rig, Thermal radiation rig, Electrical Insulation test rig, Flammability test rig, Fume cupboard, Inclinator, Ballistics gun, Headforms, LVDT, UV and temperature conditioning units, Thermometers, Timers and clocks, Rules, steel tapes and micrometers, Gauge rods, Balances, Volumetric glassware, Loading and positioning masses, Field of vision gauges, Strain Gauge, Chart recorder, Insulation tester and Frequency modulator, Barometer, Thermo-hygrometers
	EN 812	Industrial bump caps	
	EN 443 Excluding: 4.7.2 Radiant heat test: Areas 3a & 3b, 4.9.1 Protection against molten metal: Areas 1a and 1b 4.9.2 Protection against molten metal: Areas 3a and 3b, 4.10.2 Heat resistance: Area 3a, 4.11 Flame	Helmets for firefighting in buildings and other structures	
	EN 16471 EN 16473 Excluding: nickel release and material conformity	Firefighters helmets	
	EN1078	Helmets for pedal cyclists and for users of skateboards and roller skates	



Southeast Asia
Accreditation Body

Mechanical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Mechanical performance, including flammability and physical characteristics	EN 1080	Impact protection helmets for young children	
	EN 1384	Helmets for equestrian activities	
	PAS 015	Helmets for equestrian use, Excluding 6.6 Durability of quick-release mechanisms	
	ASTM F1163	Protective headgear used in horse sports and horseback riding	
	ASTM F1446 Excluding: Chin bar rigidity test	Protective headgears	
	EN 1385	Helmets for canoeing and whitewater sports	
	EN 12492	Helmets for mountaineers	
	PSDB 21/04 Excluding: Flammable Liquid Trap (Clause 8)	Public order helmets	
	BS 7928	Head protectors for Cricketers	

Mechanical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Respiratory Protective Equipment			
Mechanical performance, including physical characteristics	EN 136 Excluding: Inward leakage with SF ₆	Full face masks for respiratory protective devices	Sodium chloride flame photometer, Paraffin oil penetration test rig, Practical performance Gallery, Inward leakage rig, Mechanical strength rig, Dolomite dust rig, Carbon dioxide analyzer,
	EN 137 Excluding: High pressure parts	Self-contained open-circuit compressed air breathing apparatus with full face mask	
	EN 138 Excluding: Electrostatic properties, Exhalation valve leakage	Fresh air hose breathing apparatus for use with, full or half mask or mouthpiece assembly	



Southeast Asia
Accreditation Body

Mechanical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Mechanical performance, including physical characteristics	EN 14594 Excluding: Electrostatic properties; Hood material (mechanical properties); Inward leakage with SF ₆ ; Protective clothing – abrasive blasting testing	Continuous flow compressed air line breathing apparatus	Noise level measurement rig including Anechoic room, Flammability test rig, Valve leakage test rig, Tensile rig, Thermal radiation rig, Gas test rig with appropriate detectors, Anemometer, Apertometer, Balances, Barometer, Breathing machines, Cold room, Conditioning cabinets, Dataloggers, Flowmeters, Gas flow meters, Manometers and Pressure gauges, Timers and clocks, Test masses, Headforms, Torsos, Volumetric glassware
	EN 14593-1, EN 14593-2 Excluding: Electronic switch over warning device testing to EN60079-0 and EN50020; Electrostatic properties; Inward leakage with SF ₆ ; Protective clothing – abrasive blasting testing	Compressed air line breathing apparatus with demand valve	
	EN 140 Excluding: Inward leakage with SF ₆	Half masks and quarter masks for respiratory protective devices	
	EN 14387 Excluding: NO _x and Hg	Gas filters and combined filters	
	EN 142 Excluding: Exhalation valve leakage	Mouthpiece assemblies for respiratory protective devices	
	EN 143	Particle filters used in respiratory protective equipment	
	EN 148-1	Thread connections	
	EN 149	Filtering half masks to protect against particles	
	EN 269 Excluding: Electrostatic properties	Powered fresh air hose breathing apparatus incorporating a hood	



Southeast Asia
Accreditation Body

Mechanical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Mechanical performance, including physical characteristics	EN 403 Excluding: Inward leakage (breathing zone); Gas capacity for propenal, hydrogen chloride and carbon monoxide; Integrity of filtering smoke hood at high carbon monoxide concentrations; Temperature of inhaled air Pressure changes	Filtering devices with hood for escape from fire	
	EN 405 Excluding: Inward leakage test with SF6	Filtering half masks to protect against gases or gases and particles	
	EN 1146 Excluding: Hood material and seams; High pressure parts; Insulation resistance of non-metallic carrying container; Inward leakage with SF6	Self-contained open-circuit compressed air breathing apparatus incorporating a hood for escape	
	EN 1827 Excluding: Inward leakage with SF6	Half masks without inhalation valves and with separable filters to protect against gases or gases and particles or particles only	
	EN 12083	Filters with breathing hoses (non-mask mounted filters) - particle filters, gas filters and combined filters - used in respiratory protective devices	
	EN 12941 Excluding: Inward leakage with SF6; Intrinsic safety testing of electrical components; NOx	Powered filtering devices incorporating a helmet or a hood	



Southeast Asia
Accreditation Body

Mechanical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Mechanical performance, including physical characteristics	EN 12942 Excluding: Inward leakage with SF ₆ ; Intrinsic safety testing of electrical components; NO _x	Powered filtering devices incorporating full face masks, half masks or quarter masks	
	AS/NZS 1716 Excluding: Sections 7, 10 and 11; NO _x ; Clause 2.1.7 Protection against explosion	Respiratory protective devices	
Flammability	EN 13274-4	Respiratory protective devices and fabrics	TC thermometer, Gauge stick, Ruler, Manometer

Optical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
<u>Eye and Face Protection</u>			
Optical performance, including mechanical and physical characteristics	ANSI/ISEA Z87.1 Excluding: 5.1.3 Haze, 5.1.5 (Prescription Protectors), 7.3 Automatic darkening welding filters – transmittance properties	Occupational and educational eye and face protection	Telescope and targets, Spectrophotometer, Transmittance Photometer, Diffusion rig, Reflectometer, Dust cabinet, Ballistics rig, Molten metal splash rig and furnace, Headforms, Robustness rig, Load rig, Field of vision rig, Gas test chamber, Split field polarizer rig, Field of vision rig, Thermal radiation rig, Frame minimum robustness rig,
	EN 166 Excluding: Resistance to fogging of oculars; Oculars with corrective effect; Oculars with enhanced reflectance in the infrared;	Personal eye protection	
	EN 166:1995 (withdrawn) Excluding: Resistance to fogging of oculars	Personal eye protection	



Southeast Asia
Accreditation Body

Optical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Optical performance, including mechanical and physical characteristics	EN 167 Excluding: Determination of spectral reflectance in infrared	Personal eye protection	Lateral deformation Test Rig, Falling sand rig, Spectacle frame tester, Radiant heat protection rig, Drop tubes and masses, Timers and clocks, Tape measures, Steel rule and Micrometer, Light Box, UV chambers, Digital multimeter, Chart recorder, Volumetric glassware, Balances, Thermocouple rod, Thermometer, Burners, Incubator, Freezer, Radiometer, Radius Gauges, Practical performance Gallery, Insulation tester, Lens retention test lever, Corrosion test equipment Visor Misting Rig
	EN 168 Excluding: Resistance to fogging of oculars	Personal eye protection	
	EN 169 Excluding: Oculars with enhanced reflectance in the infrared	Welding filters	
	EN 170	Ultra-violet filters	
	EN 171 Excluding: Oculars with enhanced reflectance in the infrared	Infra-red filters	
	EN 172 Excluding: Special transmittance requirements - photochromic filters	Sunglare filters (industrial use)	
	EN 174 Excluding: Resistance to fogging of oculars	Ski goggles for downhill skiing	
	EN 175	Welding eye and face protectors	
	EN 1731 Excluding: Nickel release	Mesh eye and face protectors	
	ISO 12311, ISO 12312-1 Excluding: Photochromic filters 4.3 Physiological compatibility 6.2 Local variations in refractive power 10 Resistance to abrasion	Sunglasses and related eyewear	



Southeast Asia
Accreditation Body

Optical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Optical performance, including mechanical and physical characteristics	EN 13178 Excluding: Resistance to fogging	Eye protectors for snowmobile users	
	EN 14458 Excluding: Enhanced reflectance; Abrasion - Taber test; Resistance to fogging	High performance visors intended only for use with protective helmets	
	PSDB 21/04	Public order visor	

Note:

1. Excluding: Electrical safety and EMC requirements
2. This scope is formatted as part of a single document including Certificate of Accreditation No. 763862.

Rathana Xiong, Vice President