

CERTIFICATE OF ACCREDITATION

This is to attest that

TUV AUSTRIA ROMANIA S.R.L.

OFFICE: CALEA PLEVNEI 139B, CORP A, BUCHAREST, 060011, ROMANIA LABORATORY: ȘOSEAUA CENTURA DE EST NR. 277B, PLOIEȘTI, 100190, ROMANIA

Testing Laboratory TL-1173

has met the requirements of AC89, *IAS Accreditation Criteria for Testing Laboratories*, and has demonstrated compliance with ISO/IEC Standard 17025:2017, *General requirements for the competence of testing and calibration laboratories*. This organization is accredited to provide the services specified in the scope of accreditation.

Effective Date September 26, 2023



President

International Accreditation Service, Inc.

3060 Saturn Street, Suite 100, Brea, California 92821, U.S.A. | www.iasonline.org

TUV AUSTRIA ROMANIA S.R.L.

www.tuv-austria.ro

Contact Name Mr. George Gheorghiu

Contact Phone +40 733101710

Accredited to ISO/IEC 17025:2017

Effective Date September 26, 2023

DESTRUCTIVE TESTING I	DESTRUCTIVE TESTING LABORATORY		
Tensile Testing	Tensile Testing		
ASME Sec. IX art QW-150	Boiler and Pressure Vessel Code		
ASTM A370 Sect. 6-14	Standard Test Methods and Definitions for Mechanical Testing of Steel Products		
ASTM E8/E8M	Standard Test Methods for Tension Testing of Metallic Materials		
SR EN ISO 4136:2022	Destructive tests on welds in metallic materials — Transverse tensile test		
SR EN ISO 5178:2019	Destructive tests on welds in metallic materials. Longitudinal tensile test on weld metal in fusion welded joints		
SR EN ISO 6892-1:2020	Metallic materials. Tensile testing Method of test at room temperature		
Bend Test			
ASME Sec. IX art QW-160	Boiler and Pressure Vessel Code		
ASTM A370 Sect. 6-14	Standard Test Methods and Definitions for Mechanical Testing of Steel Products		
ASTM E190	Standard Test Method for Guided Bend Test for Ductility of Welds		
ASTM E290	Standard Test Methods for Bend Testing of Material for Ductility		
SR EN ISO 5173:2023	Destructive tests on welds in metallic materials — Bend tests		
SR EN ISO 7438:2020	Metallic materials. Bend test		
Charpy Pendulum Impact	Test		
ASME Sec. VIII UCS-67	Boiler and Pressure Vessel Code		
ASME Sec. IX art QW-170	Boiler and Pressure Vessel Code		
ASTM A370 Sect. 20-30	Standard Test Methods and Definitions for Mechanical Testing of Steel Products		
ASTM E23	Standard Test Methods for Notched Bar Impact Testing of Metallic Materials		
SR EN ISO 148-1:2017	Metallic materials — Charpy pendulum impact test Part 1: Test method		
SR EN ISO 9016:2022	Destructive tests on welds in metallic materials — Impact tests — Test specimen location, notch orientation and examination		
Hardness Test			
ASME Sec. IX art QW-180	Boiler and Pressure Vessel Code		



International Accreditation Service, Inc.

ASTM A1038	Standard Test Method for Portable Hardness Testing by the Ultrasonic Contact Impedance Method
ASTM E10	Standard Test Method for Brinell Hardness of Metallic Materials
ASTM E92	Standard Test Methods for Vickers Hardness and Knoop Hardness of Metallic Materials
ASTM E110	Standard Test Method for Rockwell and Brinell Hardness of Metallic Materials by Portable Hardness Testers
ASTM E384	Standard Test Method for Microindentation Hardness of Materials
SR EN ISO 6506-1:2015	Metallic materials — Brinell hardness test — Part 1: Test method
SR EN ISO 6507-1:2018	Metallic materials — Vickers hardness test — Part 1: Test method
SR EN ISO 9015-1:2011	Destructive tests on welds in metallic materials — Hardness testing — Part 1: Hardness test on arc welded joints
Macroscopic and Microsc	opic Examination
ASTM E112	Standard Test Methods for Determining Average Grain Size
ASTM E340	Standard Practice for Macroetching Metals and Alloys
ASTM E381	Standard Method of Macroetch Testing Steel Bars, Billets, Blooms, and Forgings
SR EN ISO 643:2020	Steels — Micrographic determination of the apparent grain size
SR EN ISO 17639:2022	Destructive tests on welds in metallic materials — Macroscopic and microscopic examination of welds
STAS 7626-79	Metallography microstructure etalon pieces for steels
Fracture Test	
API 1104 art. 5.6.3	Welding Pipelines and Related Facilities
ASME Sec. IX art QW-182	Boiler and Pressure Vessel Code
SR EN ISO 9017:2018	Destructive tests on welds in metallic materials - Fracture test
Flattening Test	
ASTM A370 A2.5.2.1	Standard Test Methods and Definitions for Mechanical Testing of Steel Products
SR EN ISO 8492:2014	Metallic materials — Tube — Flattening test
NONDESTRUCTIVE TEST	ING LABORATORY
X-ray Fluorescence Spect	rometry
ASTM A751	Standard Test Methods and Practices for Chemical Analysis of Steel Products
ASTM E1476	Standard Guide for Metals Identification, Grade Verification, and Sorting
CR 10299:1998	Guidelines for the preparation of standard routine methods with wavelength-dispersive X-ray fluorescence spectrometry
Liquid Penetrant Examina	tion
ASME Sec. V art 6,24	Boiler and Pressure Vessel Code



International Accreditation Service, Inc.

ASTM E165/E165M	Standard Practice for Liquid Penetrant Testing for General Industry
ASTM E1417/E1417M	Standard Practice for Liquid Penetrant Testing
SR EN 10228-2:2016	Non-destructive testing of steel forgings - Part 2: Penetrant testing
SR EN ISO 3452-1:2021	Non-destructive testing — Penetrant testing — Part 1: General principles
Magnetic Particle Testing	
ASME Sec. V art 7,25	Boiler and Pressure Vessel Code
ASTM A275/A275M	Standard Practice for Magnetic Particle Examination of Steel Forgings
ASTM E709	Standard Guide for Magnetic Particle Testing
SR EN 1369:2013	Founding - Magnetic particle testing
SR EN 10228-1:2016	Non-destructive testing of steel forgings - Part 1: Magnetic particle inspection
SR EN ISO 9934-1:2017	Non-destructive testing - Magnetic particle testing - Part 1: General principles
SR EN ISO 17638:2017	Non-destructive testing of welds - Magnetic particle testing
Ultrasonic Examination	
ASME Sec. V art 5,23	Boiler and Pressure Vessel Code
ASTM A388/A388M	Standard Practice for Ultrasonic Examination of Steel Forgings
ASTM A418/A418M	Standard Practice for Ultrasonic Examination of Turbine and Generator Steel Rotor Forgings
ASTM A435/A435M	Standard Specification for Straight-Beam Ultrasonic Examination of Steel Plates
ASTM A577/A577M	Standard Specification for Ultrasonic Angle-Beam Examination of Steel Plates
ASTM A578/A578M	Standard Specification for Straight-Beam Ultrasonic Examination of Rolled Steel Plates for Special Applications
ASTM A609/A0609M	Standard Practice for Castings, Carbon, Low-Alloy, and Martensitic Stainless Steel, Ultrasonic Examination Thereof
ASTM A745/A745M	Standard Practice for Ultrasonic Examination of Austenitic Steel Forgings
ASTM E213	Standard Practice for Ultrasonic Testing of Metal Pipe and Tubing
ASTM E273	Standard Practice for Ultrasonic Testing of the Weld Zone of Welded Pipe and Tubing
ASTM E797/E797M	Standard Practice for Measuring Thickness by Manual Ultrasonic Pulse-Echo Contact Method
ASTM E2373/E2373M	Standard Practice for Use of the Ultrasonic Time of Flight Diffraction (TOFD) Technique
ASTM E2700	Standard Practice for Contact Ultrasonic Testing of Welds Using Phased Arrays
SR EN 10160:2001	Ultrasonic testing of steel flat product of thickness equal to or greater than 6 mm (reflection method)
SR EN 10228-3:2016	Non-destructive testing of steel forgings - Part 3: Ultrasonic testing of ferritic or martensitic steel forgings



International Accreditation Service, Inc.

SR EN 10228-4:2016	Non-destructive testing of steel forgings - Part 4: Ultrasonic testing of austenitic and austenitic-ferritic stainless-steel forgings
SR EN 10307:2002	Non-destructive testing. Ultrasonic testing of austenitic and austentitic-ferritic stainless steels flat products of thickness equal to or greater than 6 mm (reflection method)
SR EN 10308:2002	Non-destructive testing - Ultrasonic testing of steel bars
SR EN ISO 10863:2020	Non-destructive testing of welds - Ultrasonic testing - Use of time-of-flight diffraction technique (TOFD)
SR EN ISO 10893-8:2011	Non-destructive testing of steel tubes — Part 8: Automated ultrasonic testing of seamless and welded steel tubes for the detection of laminar imperfections
SR EN ISO 10893- 10:2011	Non-destructive testing of steel tubes — Part 10: Automated full peripheral ultrasonic testing of seamless and welded (except submerged arc-welded) steel tubes for the detection of longitudinal and/or transverse imperfections
SR EN ISO 13588:2019	Non-destructive testing of welds — Ultrasonic testing — Use of automated phased array technology
SR EN ISO 16809:2019	Non-destructive testing — Ultrasonic thickness measurement
SR EN ISO 17640:2019	Non-destructive testing of welds - Ultrasonic testing - Techniques, testing levels, and assessment
Radiographic Examinatio	n
ASME Sec. V art 2,22	Boiler and Pressure Vessel Code
ASTM E94/E94M	Standard Guide for Radiographic Examination Using Industrial Radiographic Film
ASTM E1030/E1030M	Standard Practice for Radiographic Examination of Metallic Castings
ASTM E1032	Standard Practice for Radiographic Examination of Weldments Using Industrial X-Ray Film
ASTM E1742	Standard Practice for Radiographic Examination
SR EN 12681-1:2018	Founding - Radiographic testing - Part 1: Film techniques
SR EN ISO 5579:2014	Non-destructive testing - Radiographic testing of metallic materials using film and X- or gamma rays - Basic rules
SR EN ISO 10893-6:2019	Non-destructive testing of steel tubes — Part 6: Radiographic testing of the weld seam of welded steel tubes for the detection of imperfections
SR EN ISO 10893-7:2019	Non-destructive testing of steel tubes — Part 7: Digital radiographic testing of the weld seam of welded steel tubes for the detection of imperfections
SR EN ISO 17636-1:2022	Non-destructive testing of welds — Radiographic testing — Part 1: X- and gamma-ray techniques with film
SR EN ISO 20769-1:2019	Non-destructive testing — Radiographic inspection of corrosion and deposits in pipes by X- and gamma rays — Part 1: Tangential radiographic inspection
SR EN ISO 20769-2:2019	Non-destructive testing - Radiographic inspection of corrosion and deposits in pipes by X- and gamma rays - Part 2: Double wall radiographic inspection



International Accreditation Service, Inc.

Eddy Current Testing		
ASME Sec. V art 8,26	Boiler and Pressure Vessel Code	
ASTM E243	Standard Practice for Electromagnetic (Eddy Current) Examination of Copper and Copper-Alloy Tubes	
ASTM E2096/E2096M	Standard Practice for In Situ Examination of Ferromagnetic Heat-Exchanger Tubes Using Remote Field Testing	
SR EN 1971-1:2020	Copper and copper alloys - Eddy current test for measuring defects on seamless round copper and copper alloy tubes - Part 1: Test with an encircling test coil on the outer surface	
SR EN 1971-2:2020	Copper and copper alloys - Eddy current test for measuring defects on seamless round copper and copper alloy tubes - Part 2: Test with an internal probe on the inner surface	
SR EN ISO 10893-2:2011	Non-destructive testing of steel tubes — Part 2: Automated eddy current testing of seamless and welded (except submerged arc-welded) steel tubes for the detection of imperfections	
SR EN ISO 10893- 2:2011/A1:2020	Non-destructive testing of steel tubes — Part 2: Automated eddy current testing of seamless and welded (except submerged arc-welded) steel tubes for the detection of imperfections	
SR EN ISO 17643:2016	Non-destructive testing of welds — Eddy current testing of welds by complex- plane analysis	
SR EN ISO 21968:2020	Non-magnetic metallic coatings on metallic and non-metallic basis materials — Measurement of coating thickness — Phase-sensitive eddy-current method	
SR ISO 20669:2021	Non-destructive testing — Pulsed eddy current testing of ferromagnetic metallic components	
Acoustic Emission Testin	g	
ASME Sec. V art 11	Boiler and Pressure Vessel Code	
ASTM E569/E569M	Standard Practice for Acoustic Emission Monitoring of Structures During Controlled Stimulation	
ASTM E1211/E1211M	Standard Practice for Leak Detection and Location Using Surface-Mounted Acoustic Emission Sensors	
ASTM E1419/E1419M	Standard Practice for Examination of Seamless, Gas-Filled, Pressure Vessels Using Acoustic Emission	
SR EN 14584:2013	Non-destructive testing - Acoustic emission testing - Examination of metallic pressure equipment during proof testing - Planar location of AE sources	
SR EN ISO 18081:2016	Non-destructive testing - Acoustic emission testing (AT) - Leak detection by means of acoustic emission	
MICROBIOLOGY TESTING LABORATORY		
EN ISO 11290-1:2017	Microbiology of the food chain — Horizontal method for the detection and enumeration of Listeria monocytogenes and of Listeria spp. — Part 1: Detection method	



International Accreditation Service, Inc.

EN ISO 11290-2:2017	Microbiology of the food chain — Horizontal method for the detection and enumeration of Listeria monocytogenes and of Listeria spp. — Part 2: Enumeration method
In-house ELISA (enzyme- linked immunosorbent assay)- PO-233	Antibiotic Residue Testing in food and feed
In-house ELISA (enzyme- linked immunosorbent assay)- PO-234	Mycotoxin Detection in food and feed
SR EN ISO 4833-1:2014	Microbiology of the food chain — Horizontal method for the enumeration of microorganisms — Part 1: Colony count at 30 °C by the pour plate technique
SR EN ISO 4833- 1:2014/A1:2022	Microbiology of the food chain — Horizontal method for the enumeration of microorganisms — Part 1: Colony count at 30 °C by the pour plate technique
SR EN ISO 4833-2:2014	Microbiology of the food chain — Horizontal method for the enumeration of microorganisms — Part 2: Colony count at 30 °C by the surface plating technique
SR EN ISO 4833- 2:2014/A1:2022	Microbiology of the food chain — Horizontal method for the enumeration of microorganisms — Part 2: Colony count at 30 °C by the surface plating technique
SR EN ISO 6222:2004	Water quality- Enumeration of culturable micro-organisms — Colony count by inoculation in a nutrient agar culture medium
SR EN ISO 6579-1:2017	Microbiology of the food chain — Horizontal method for the detection, enumeration and serotyping of Salmonella — Part 1: Detection of Salmonella spp.
SR EN ISO 6579- 1:2017/A1:2020	Microbiology of the food chain — Horizontal method for the detection, enumeration and serotyping of Salmonella — Part 1: Detection of Salmonella spp.
SR EN ISO 6888-1:2021	Microbiology of the food chain — Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) — Part 1: Method using Baird-Parker agar medium
SR EN ISO 6888-2:2021	Microbiology of the food chain — Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) — Part 2: Method using rabbit plasma fibrinogen agar medium
SR EN ISO 6888-3:2003	Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) — Part 3: Detection and MPN technique for low numbers
SR EN ISO 6888- 3:2003/AC:2011	Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) — Part 3: Detection and MPN technique for low numbers
SR EN ISO 7899-2:2002	Water quality-Detection and enumeration of intestinal enterococci - Part 2: Membrane filtration method



International Accreditation Service, Inc.

SR EN ISO 9308-1:2015	Water quality-Enumeration of Escherichia coli and coliform bacteria - Part 1: Membrane filtration method for waters with low bacterial background flora
SR EN ISO 14189:2017	Water quality-Enumeration of Clostridium perfringens — Method using membrane filtration
SR EN ISO 15213-1:2023	Microbiology of food and animal feeding stuffs - Horizontal method for the detection and enumeration of Clostridium spp. — Part 1: Enumeration of sulfite-reducing Clostridium spp. by colony-count technique
SR EN ISO 16212:2017	Cosmetics — Microbiology — Enumeration of yeast and mould
SR EN ISO 16212:2017/A1:2022	Cosmetics — Microbiology — Enumeration of yeast and mould
SR EN ISO 16266:2008	Water quality-Detection and enumeration of Pseudomonas aeruginosa — Method by membrane filtration - Method by membrane filtration
SR EN ISO 18415:2017	Cosmetics — Microbiology — Detection of specified and non-specified microorganisms
SR EN ISO 18416:2016	Cosmetics — Microbiology — Detection of Candida albicans
SR EN ISO 21149:2017	Cosmetics — Microbiology — Enumeration and detection of aerobic mesophilic bacteria
SR EN ISO 21150:2016	Cosmetics — Microbiology — Detection of Escherichia coli
SR EN ISO 21528-1:2017	Microbiology of the food chain — Horizontal method for the detection and enumeration of Enterobacteriaceae — Part 1: Detection of Enterobacteriaceae
SR EN ISO 21528-2:2017	Microbiology of the food chain — Horizontal method for the detection and enumeration of Enterobacteriaceae — Part 2: Colony-count technique
SR EN ISO 22717:2016	Cosmetics — Microbiology — Detection of Pseudomonas aeruginosa
SR EN ISO 22718:2016	Cosmetics — Microbiology — Detection of Staphylococcus aureus
SR EN ISO 22718:2016/A1:2022	Cosmetics — Microbiology — Detection of Staphylococcus aureus
SR ISO 4832:2009	Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coliforms — Colony-count technique
SR ISO 16649-2:2007	Microbiology of food and animal feeding stuffs- Horizontal method for the enumeration of beta-glucuronidase-positive Escherichia coli — Part 2: Colony-count technique at 44 degrees C using 5-bromo-4-chloro-3-indolyl beta-D-glucuronide
SR ISO 21527-1:2009	Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of yeasts and moulds — Part 1: Colony count technique in products with water activity greater than 0,95
SR ISO 21527-2:2009	Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of yeasts and moulds — Part 2: Colony count technique in products with water activity less than or equal to 0,95
CHEMISTRY TESTING LA	BORATORY
Environmental	
ASTM UOP1005-14	Trace Metals in Organics by ICP-MS
·	Commercial





International Accreditation Service, Inc.

EPA 200.2	Sample Preparation Procedure for Spectrochemical Determination of Total Recoverable Elements
EPA Method 200.8	Determination of Trace Elements in Waters and Wastes by Inductively Coupled Plasma-Mass Spectrometry
EPA 7000B	Flame Atomic Absorption Spectrophotometry
EPA 8015D	Nonhalogenated Organics Using GC/FID
EPA 8260D	Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)
EPA 8270E	Semi-volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC-MS)
EPA 9038	Sulfate (Turbidimetric) in ground water, drinking and surface waters, and domestic and industrial wastes for all concentration ranges of sulfate
EPA 9065A AN 141 Thermo	Phenolics (Spectrophotometric, Manual 4-AAP with Distillation) Determination of Inorganic Cations and Ammonium in Environmental Waters by Ion Chromatography
In house method PO-103	Operation procedure for TPH determination from soil and sediments
In house method PO-107	Determination of moisture, dry matter, calcination losses and mineral substances in waste
ISO 18400-101:2017	Soil quality — Sampling — Part 101: Framework for the preparation and application of a sampling plan
ISO 18400-102:2017	Soil quality — Sampling — Part 102: Selection and application of sampling techniques
ISO 18400-103:2017	Soil quality — Sampling — Part 103: Safety
ISO 18400-104:2018	Soil quality — Sampling — Part 104: Strategies
ISO 18400-202:2018	Soil quality — Sampling — Part 202: Preliminary investigations
ISO 18400-203:2018	Soil quality — Sampling — Part 203: Investigation of potentially contaminated sites
ISO 28540:2011	Water quality — Determination of 16 polycyclic aromatic hydrocarbons (PAH) in water — Method using gas chromatography with mass spectrometric detection (GC-MS)
SR 7587:1996	Water quality. Determination of extractable substances with solvents. Gravimetric method
SR 7877-2:1995	Water quality. Determination of petroleum products content. Spectrophotometric method
SR 13511:2007	Soil quality. Determination of the total content of hydrocarbons in the soil. Gravimetric method
SR CEN/TR 16192:2020	Waste - Guidance on analysis of eluates
	I .



International Accreditation Service, Inc.

SR EN 872:2005	Water quality - Determination of suspended solids - Method by filtration through glass fibre filters
SR EN 12014-2:2018	Foodstuffs - Determination of nitrate and/or nitrite content - Part 2: HPLC/IC method for the determination of nitrate content of vegetables and vegetable products
SR EN 12014-4:2005	Foodstuffs - Determination of nitrate and/or nitrite content - Part 4: Ion-exchange chromatographic (IC) method for the determination of nitrate and nitrite content of meat products
SR EN 12880:2002	Characterization of sludges - Determination of dry residue and water content
SR EN 15216:2021	Environmental solid matrices - Determination of total dissolved solids (TDS) in water and eluates
SR EN 26777:2002	Water quality - Determination of nitrite - Molecular absorption spectrometric method
SR EN 26777:2002/C91:2006	Water quality - Determination of nitrite - Molecular absorption spectrometric method
SR EN 27888:1997	Water quality - Determination of electrical conductivity
SR EN ISO 6468:2000	Water quality — Determination of 16 polycyclic aromatic hydrocarbons (PAH) in water — Method using gas chromatography with mass spectrometric detection (GC-MS)
SR EN ISO 6878:2005	Water quality — Determination of phosphorus — Ammonium molybdate spectrometric method
SR EN ISO 7980:2002	Water quality – Determination of calcium and magnesium – Atomic absorption spectrometric method
SR EN ISO 8467:2001	Water quality — Determination of permanganate index
SR EN ISO 9377-2:2002	Water quality — Determination of hydrocarbon oil index — Part 2: Method using solvent extraction and gas chromatography
SR EN ISO 9963-1:2002	Water quality — Determination of alkalinity — Part 1: Determination of total and composite alkalinity
SR EN ISO 10304-1:2009	Water quality — Determination of dissolved anions by liquid chromatography of ions — Part 1: Determination of bromide, chloride, fluoride, nitrate, nitrite, phosphate and sulfate
SR EN ISO 10390:2022	Soil, treated biowaste and sludge – Determination of pH
SR EN ISO 10523:2012	Water quality — Determination of pH
SR EN ISO 14911:2003	Water quality — Determination of dissolved Li+, Na+, NH4+, K+, Mn2+, Ca2+, Mg2+, Sr2+ and Ba2+ using ion chromatography — Method for water and waste water



International Accreditation Service, Inc.

SR EN ISO 16558-1:2016	Soil quality — Risk-based petroleum hydrocarbons — Part 1: Determination of aliphatic and aromatic fractions of volatile petroleum hydrocarbons using gas chromatography (static headspace method)
SR EN ISO 16558- 1:2016/A1:2020	Soil quality — Risk-based petroleum hydrocarbons — Part 1: Determination of aliphatic and aromatic fractions of volatile petroleum hydrocarbons using gas chromatography (static headspace method)
SR EN ISO 16703:2011	Soil quality — Determination of content of hydrocarbon in the range C10 to C40 by gas chromatography
SR EN ISO 17294-1:2007	Water quality — Application of inductively coupled plasma mass spectrometry (ICP-MS) — Part 1: General guidelines
SR EN ISO 17294-2:2007	Water quality — Application of inductively coupled plasma mass spectrometry (ICP-MS) — Part 2: Determination of selected elements including uranium isotopes
SR EN ISO 22155:2016	Soil quality — Gas chromatographic determination of volatile aromatic and halogenated hydrocarbons and selected ethers — Static headspace method
SR ISO 6059:2008	Water quality — Determination of the sum of calcium and magnesium — EDTA titrimetric method
SR ISO 7150-1:2001	Water quality — Determination of ammonium — Part 1: Manual spectrometric method
SR ISO 7890-3:2000	Water quality — Determination of nitrate — Part 3: Spectrometric method using sulfosalicylic acid
SR ISO 9297:2001	Water quality — Determination of chloride — Silver nitrate titration with chromate indicator (Mohr's method)
SR ISO 11047:1999	Soil quality — Extraction of trace elements soluble in aqua regia
SR ISO 11265+A1:1998	Soil quality — Determination of the specific electrical conductivity
SR ISO 11423-1:2000	Water quality — Determination of benzene and some derivatives — Part 1: Head-space gas chromatographic method
SR ISO 11465:1998	Soil quality — Determination of dry matter and water content on a mass basis — Gravimetric method
STAS 7184/7-87	Soils. Determination of mineral salts in the 1:5 aqueous extract
STAS 9187-84	Surface water, underground water, waste water. Determination of the residue
STAS 12586-87	Sludges resulting from surface water treatment and waste water treatment. Determination of moisture, dry matter, calcination losses (volatile substances) and mineral substances
Petroleum Products	
ASTM D1840-2022	Standard Test Method for Naphthalene Hydrocarbons in Aviation Turbine Fuels by Ultraviolet Spectrophotometry



International Accreditation Service, Inc.

ASTM D5453-19a	Standard Test Method for Determination of Total Sulfur in Light Hydrocarbons, Spark Ignition Engine Fuel, Diesel Engine Fuel, and Engine Oil by Ultraviolet Fluorescence
ASTM UOP1005-14	Trace Metals in Organics by ICP-MS
SR EN 14078:2014	Liquid petroleum products. Determination of fatty acid methyl ester (FAME) content in middle distillates. Infrared spectrometry method
SR EN 15487:2008	Ethanol as a blending component for petrol - Determination of phosphorus content - Ammonium molybdate spectrometric method in Ethanol
Food Products	
Małgorzata Grembecka, Anna Lebiedzińska, Piotr Szefer <i>Microchemical Journal 117</i> (2014), 77–82 PO-119	"Simultaneous separation and determination of erythritol, xylitol, sorbitol, mannitol, maltitol, fructose, glucose, sucrose and maltose in food products by high performance liquid chromatography coupled to charged aerosol detector" Determination of carbohydrates in food products
In house method PO-110	Milk and milk products — Determination of pH
ISO 3890-1:2009 IDF 75- 1:2009 - Part 1	Milk and milk products — Determination of residues of organochlorine compounds (pesticides) — Part 1: General considerations and extraction methods
ISO 3890-2:2009 IDF 75- 2:2009 - Part 2	Milk and milk products — Determination of residues of organochlorine compounds (pesticides) — Part 2: Test methods for crude extract purification and confirmation
SR 91:2007	Bread and fresh pastries. Analysis methods: The organoleptic examination Determination of the physical and chemical properties of bread and pastries.
SR 110-12:1998	Sugar. Methods of analysis. Determination of the pH value, in solution
SR 784-3:2009	Honey. Part 3: Analysis methods: Determination of the electrical conductivity of honey Determination of acidity of honey Determination of reduced sugar by Elser method Determination of hydrolyzed sugar by Elser method Determination of moisture / dry matter of honey Determination of impurities and substances insoluble in water
SR 2213-4:2007	Sweet products. Determination of water content and other volatile substances
SR 2213-9:2009	Sweet products. Part 9: Determination of the pH value
SR 6182-14:2009	Wine. Part 14. Determination of pH
SR 8613-1:2009	Food concentrates. Part 1: Determination of humidity
SR 8613-2:2009	Food concentrates. Part 2: Determination of ash
-	



International Accreditation Service, Inc.

SR 8613-6:2009	Food concentrates. Part 6: Determination of nitrogen and protein calculation
SR 9065-7:2007	Meat and meat preparations. Determination of hydrolysable nitrogen
SR 9065-10:2007	Meat and meat preparations. Determination of the oxidation state of the fat. The Kreis reaction
SR 9065-11:2007	Meat and meat preparations. Identification of hydrogen sulphide
SR 13013-3:1994	Cereal, milling, bakery products, biscuits and pasta. Determination of crude protein content
SR EN 1132:1996	Fruit and vegetable juices - Determination of pH value
SR EN 1186-1:2003 SR EN 1186-2:2022 SR EN 1186-3:2022 SR EN 1186-9:2003 SR EN 1186-15:2003 Guide Metal and Alloys used in food contact materials and articles Guidelines on testing conditions for articles in contact with foodstuffs In-house method PO-109	Materials and articles in contact with foodstuffs - Test methods for overall migration Food contact materials. Contaminants migration Ag, Al, As, Ba, Be, B, Bi, Cd, Ca, Cr, Co, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, Pb, Se, Sb, Sr, Sn, Ti, W, V, Zn, Zr.
SR EN 1444:2002	Meat and meat products — Determination of free fat content
SR EN 1528-1:2004 SR EN 1528-2:2003 SR EN 1528-3:2004 SR EN 1528-4:2004	Fatty food. Determination of pesticides and polychlorinated biphenyls (PCBs) Determination, confirmatory tests, miscellaneous)
SR EN 15662:2018 PO-101	Foods of plant origin. Multimethod for the determination of pesticide residues using GC- and LC-based analysis following acetonitrile extraction/partitioning and clean-up by dispersive SPE. Modular QuEChERS-method— Determination of pesticide residues foods of animal and plant origin by chromatographic techniques (GC/MS, LC/MS)
SR EN 15763:2010	Foodstuffs - Determination of trace elements - Determination of arsenic, cadmium, mercury and lead in foodstuffs by inductively coupled plasma mass spectrometry (ICP-MS) after pressure digestion
SR EN 16618:2015	Food analysis. Determination of acrylamide in food by liquid chromatography tandem mass spectrometry (LC-ESI-MS/MS)
SR EN ISO 662:2016	Animal and vegetable fats and oils — Determination of moisture and volatile matter content
SR EN ISO 712:2010	Cereals and cereal products — Determination of moisture content — Reference method
SR EN ISO 1666:1999	Starch — Determination of moisture content — Oven-drying method



International Accreditation Service, Inc.

SR EN ISO 3727-1:2002	Butter - Determination of moisture, non-fat solids and fat contents — Part 1: Determination of moisture content (Reference method).
SR EN ISO 5534:2004	Cheese and processed cheese — Determination of the total solids content (Reference method)
SR EN ISO 6540:2021	Maize — Determination of moisture content (on milled grains and on whole grains)
SR EN ISO 8968-1:2014	Milk and milk products — Determination of nitrogen content — Part 1: Kjeldahl principle and crude protein calculation
SR ISO 936:2009	Meat and meat products — Determination of total ash
SR ISO 937:2007	Meat and meat products — Determination of nitrogen content (Reference method)
SR ISO 1442:2010	Meat and meat products — Determination of moisture content (Reference method)
SR ISO 1443:2008	Meat and meat products — Determination of total fat content
SR ISO 1573:1997	Tea — Determination of loss in mass at 103 degrees C
SR ISO 1842:2008	Fruit and vegetable products — Determination of pH
SR ISO 2917:2007	Meat and meat products — Measurement of pH — Reference method
SR ISO 7238:2009	Butter — Determination of pH of the serum — Potentiometric method
STAS 3064/3-74	Bee wax. Analysis methods: Determination of acidity of bee wax Determination of saponification index of bee wax Determination of esters index of bee wax Determination of ratio index of bee wax Determination of moisture / dry matter of bee wax
Occupational Health	,
In house method PO-113	Determination of inhalable and respirable dust - Closed spaces and indoor air
LTAR (LUKOIL) - CHEMIC	CALS / OIL AND PETROLEUM
ASTM D86-23	Standard Test Method for Distillation of Petroleum Products and Liquid Fuels at Atmospheric Pressure
ASTM D92-18	Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester
ASTM D93-20	Standard Test Methods for Flash Point by Pensky-Martens Closed Cup Tester
ASTM D95-13(2018)	Standard Test Method for Water in Petroleum Products and Bituminous Materials by Distillation
ASTM D97-17b (2022)	Standard Test Method for Pour Point of Petroleum Products
-	



International Accreditation Service, Inc.

3060 Saturn Street, Suite 100, Brea, California 92821, U.S.A. | www.iasonline.org

ASTM D130-19	Standard Test Method for Corrosiveness to Copper from Petroleum Products by Copper Strip Test
ASTM D240-19	Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter
ASTM D381-22	Standard Test Method for Gum Content in Fuels by Jet Evaporation
ASTM D445-21e2	Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (and Calculation of Dynamic Viscosity)
ASTM D473-22	Standard Test Method for Sediment in Crude Oils and Fuel Oils by the Extraction Method
ASTM D482-19	Standard Test Method for Ash from Petroleum Products
ASTM D525-12a(2019)	Standard Test Method for Oxidation Stability of Gasoline
ASTM D613-23	Standard Test Method for Cetane Number of Diesel Fuel Oil
ASTM D1796-22	Standard Test Method for Water and Sediment in Fuel Oils by the Centrifuge Method (Laboratory Procedure)
ASTM D1838-21	Standard Test Method for Copper Strip Corrosion by Liquefied Petroleum (LP) Gases
ASTM D2270-10(2016)	Standard Practice For Calculating Viscosity Index From Kinematic Viscosity At 40 °C And 100 °C
ASTM D2420-23	Standard Test Method for Hydrogen Sulfide in Liquefied Petroleum (LP) Gases (Lead Acetate Method)
ASTM D2500-23	Standard Test Method for Cloud Point of Petroleum Products
ASTM D2699-23	Standard Test Method for Research Octane Number of Spark-Ignition Engine Fuel
ASTM D2700-23	Standard Test Method for Motor Octane Number of Spark-Ignition Engine Fuel
ASTM D4006-22	ASTM D 4006-2022 Standard Test Method for Water in Crude Oil by Distillation
ASTM D4007-22	Standard Test Method for Water and Sediment in Crude Oil by the Centrifuge Method (Laboratory Procedure)
ASTM D4052-22	Standard Test Method for Density, Relative Density, and API Gravity of Liquids by Digital Density Meter
ASTM D4294-21	Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy Dispersive X-ray Fluorescence Spectrometry
ASTM D4530-15(2020)	Standard Test Method for Determination of Carbon Residue (Micro Method)
ASTM D4737-21	Standard Test Method for Calculated Cetane Index by Four Variable Equation
ASTM D5191-22	Standard Test Method for Vapor Pressure of Petroleum Products and Liquid Fuels
	a_0

TL-1173



International Accreditation Service, Inc.

ASTM D5762-18a	Standard Test Method for Nitrogen in Liquid Hydrocarbons, Petroleum and Petroleum Products by Boat-Inlet Chemiluminescence
ASTM D6079-22	Standard Test Method for Evaluating Lubricity of Diesel Fuels by the High- Frequency Reciprocating Rig (HFRR)
ASTM D6304-20	Standard Test Method for Determination of Water in Petroleum Products, Lubricating Oils, and Additives by Coulometric Karl Fischer Titration
ASTM D6371-17a	Standard Test Method for Cold Filter Plugging Point of Diesel and Heating Fuels
ASTM D7111-16(2021)	Standard Test Method for Determination of Trace Elements in Middle Distillate Fuels by Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES)
IP 470-2005	Determination of aluminium, silicon, vanadium, nickel, iron, calcium, zinc and sodium in residual fuel oil by ashing, fusion and atomic absorption spectrometry
IP 621-17	Determination of low level metallic elements in vacuum gas oil/waxy distillates — Flame atomic absorption spectrophotometry (AAS) or inductively coupled plasma-emission spectrophotometry (ICP-ES) method
ISO 562:2010	Hard coal and coke — Determination of volatile matter
ISO 579:2013	Coke — Determination of total moisture
ISO 589:2008	Hard coal — Determination of total moisture
ISO 1171:2010	Solid mineral fuels — Determination of ash
ISO 1928:2020	Coal and coke — Determination of gross calorific value
SR 66:2007	Liquefied petroleum gases. Test conditions and methods.
SR 13484:2012	Standard test method for determining the water content of the products petroleum and bituminous materials by the method distillation
SR 13552:2012	Standard method for pour point
SR 13571:2014	Method for standardization for determination of ash from coke and oil
SR 13594:2019	Testing of petroleum hydrocarbons Determination of the composition of petroleum gases liquefied Gas chromatographic analysis in particular of 1,3 - butadiene with mass fractions ≤ 0.1 % (m/m)
SR EN 116:2016	Test Method for Cold Filter Plugging Point
SR EN 228+A1:2017	Automotive fuels - Unleaded petrol - Requirements and test methods
SR EN 237:2005	Liquid petroleum products - Petrol - Determination of low lead concentrations by atomic absorption spectrometry
SR EN 589+A1:2022	Automotive fuels - LPG - Requirements and test methods
SR EN 12662:2014	Liquid petroleum products. Determination of total contamination in middle distillates, diesel fuels and fatty acid methyl esters



International Accreditation Service, Inc.

SR EN 12916+A1:2022	Petroleum products - Determination of aromatic hydrocarbon types in middle distillates - High performance liquid chromatography method with refractive index detection
SR EN 13016-1:2018	Liquid petroleum products — Vapour pressure - Part 1: Determination of air saturated vapour pressure (ASVP) and calculated dry vapour pressure equivalent (DVPE)
SR EN 14078:2014	Liquid petroleum products. Determination of fatty acid methyl ester (FAME) content in middle distillates. Infrared spectrometry method
SR EN 15471:2017	Liquefied petroleum gases – Determination of dissolved residues - High-temperature gravimetric method
SR EN 15984:2022	Petroleum industry and products - Determination of composition of refinery heating gas and calculation of carbon content and calorific value - Gas chromatography method
SR EN 16135:2012	Automotive fuels - Determination of manganese content in unleaded petrol - Flame atomic absorption spectrometric method (FAAS)
SR EN 16136:2015	Automotive fuels - Determination of manganese and iron content in unleaded petrol - Inductively coupled plasma optical emission spectrometry (ICP OES) method
SR EN 16576:2015	Automotive fuels - Determination of manganese and iron content in diesel - Inductively coupled plasma optical emission spectrometry (ICP OES) method
SR EN 27941:2000	Commercial propane and butane - Analysis by gas chromatography
SR EN ISO 2160:2002	Petroleum products — Corrosiveness to copper — Copper strip test
SR EN ISO 2592:2018	Petroleum and related products — Determination of flash and fire points — Cleveland open cup method
SR EN ISO 2719:2016	Determination of flash point — Pensky-Martens closed cup method
SR EN ISO 2719:2016/A1:2021	Determination of flash point — Pensky-Martens closed cup method
SR EN ISO 3015:2019	Petroleum and related products from natural or synthetic sources — Determination of cloud point
SR EN ISO 3104:2020	Petroleum products — Transparent and opaque liquids — Determination of kinematic viscosity and calculation of dynamic viscosity
SR EN ISO 3170:2004	Petroleum liquids — Manual sampling
SR EN ISO 3170:2004/C91:2005	Petroleum liquids — Manual sampling
SR EN ISO 3405:2019	Petroleum and related products from natural or synthetic sources - Determination of distillation characteristics at atmospheric pressure



International Accreditation Service, Inc.

SR EN ISO 3735:2002	Crude petroleum and fuel oils — Determination of sediment — Extraction method
SR EN ISO 4257:2002	Liquefied petroleum gases — Method of sampling
SR EN ISO 4257:2002/AC:2007	Liquefied petroleum gases — Method of sampling
SR EN ISO 4264:2018	Petroleum products — Calculation of cetane index of middle-distillate fuels by the four-variable equation
SR EN ISO 5163:2014	Petroleum products — Determination of knock characteristics of motor and aviation fuels — Motor method
SR EN ISO 5164:2014	Petroleum products — Determination of knock characteristics of motor fuels — Research method
SR EN ISO 5165:2020	Petroleum products — Determination of the ignition quality of diesel fuels — Cetane engine method
SR EN ISO 6245:2003	Petroleum products — Determination of ash
SR EN ISO 6246:2017	Petroleum products — Gum content of fuels — Jet evaporation method
SR EN ISO 6246:2017/A1:2020	Petroleum products — Gum content of fuels — Jet evaporation method
SR EN ISO 6251:2002	Liquefied petroleum gases — Corrosiveness to copper — Copper strip test
SR EN ISO 6976:2017	Natural gas — Calculation of calorific values, density, relative density and Wobbe indices from composition
SR EN ISO 7536:2001	Petroleum products — Determination of oxidation stability of gasoline — Induction period method
SR EN ISO 8754:2004	Petroleum products — Determination of sulfur content — Energy-dispersive X-ray fluorescence spectrometry
SR EN ISO 8819:2002	Liquefied petroleum gases — Detection of hydrogen sulfide — Lead acetate method
SR EN ISO 8973:2002	Liquefied petroleum gases — Calculation method for density and vapour pressure
SR EN ISO 8973:2002/A1:2020	Liquefied petroleum gases — Calculation method for density and vapour pressure
SR EN ISO 9029:2002	Crude Petroleum — Determination of water — Distillation method
SR EN ISO 10370:2015	Petroleum products — Determination of carbon residue — Micro method
SR EN ISO 10715:2022	Natural gas — Gas sampling
SR EN ISO 12156-1:2019	Diesel fuel — Assessment of lubricity using the high-frequency reciprocating rig (HFRR)



International Accreditation Service, Inc.

SR EN ISO 12185:2002	Crude petroleum and petroleum products — Determination of density — Oscillating U-tube method
SR EN ISO 12205:1999	Petroleum products — Determination of the oxidation stability of middle-distillate fuels
SR EN ISO 12937:2001	Petroleum products — Determination of water — Coulometric Karl Fischer titration method
SR EN ISO 12937:2001/C91:2014	Petroleum products — Determination of water — Coulometric Karl Fischer titration method
SR EN ISO 20846:2020	Petroleum products — Determination of sulfur content of automotive fuels — Ultraviolet fluorescence method
SR EN ISO 20847:2004	Petroleum products — Determination of sulfur content of automotive fuels — Energy-dispersive X-ray fluorescence spectrometry
SR EN ISO 22854:2021	Liquid petroleum products — Determination of hydrocarbon types and oxygenates in automotive-motor gasoline and in ethanol (E85) automotive fuel — Multidimensional gas chromatography method
SR ISO 9030:1995	Determination of water and sediment — Centrifuge method
SR ISO 14275:2013	Automotive fuels - Assessment of petrol and diesel fuel quality - Sampling from retail site pumps and commercial site fuel dispensers
SR ISO 19230:2021	Gas analysis — Sampling guidelines
STAS 5268-90	Hard Fuels. Determination of volatile matter from coke and coal
STAS 8160/6-70	Coke from oil. Determination of umidity
STAS 9098/1-80	Sulfur from gases. Sulfur of petroleum (Moisture determination)
STAS 9098/1-80	Sulfur from gases. Sulfur of petroleum (Content of organic substances)
UOP 539-12	Refinery Gas Analysis by Gas Chromatography

