

Hellenic Accreditation System



ACCREDITATION CERTIFICATE

No. 65-8

The Hellenic Accreditation System (ESYD), as the national accreditation body of Greece in accordance with the Law 4468/2017,

ACCREDITS

the
Analytical Testing Laboratories
of
SPECTRUMLABS S.A.

at Piraeus, Greece

under the terms of the ELOT EN ISO/IEC 17025:2017 Standard and the ESYD Criteria, to carry out tests, as specified in the attached Scope of the Accreditation, which may be revised by decisions of ESYD.

The initial accreditation was issued on 01.03.2002. This Certificate renews the accreditation, and it is valid until February 28th, 2031, provided that the accredited body will comply with the above Standard and the ESYD Criteria.

Athens, November 13th, 2025



Konstantinou Evangelos Apostolos
CEO of ESYD

Hellenic Accreditation System



Annex F1/22 to the Certificate No. **65-8**

SCOPE of ACCREDITATION

of the

Analytical Testing Laboratories

of

SPECTRUMLABS S.A.

Materials / Products to be tested	Types of test / Properties to be measured	Applied methods / Techniques to be used
Chemical tests		
1. Petroleum products	Determination of sulfur content by EDXRF (% mass)	ASTM D4294-24 ISO 8754:2025
	Determination of kinematic viscosity and calculation of dynamic viscosity (mm ² /s, cSt)	ASTM D445-24 ISO 3104:2023
	Determination of total sediment by hot filtration, TSE (% mass)	ISO 10307-1:2009 (2019) ASTM D4870-22
	Determination of total sediment by thermal ageing, TSP (Procedure A) and chemical ageing, TSA (Procedure B) (% mass)	ISO 10307-2:2009 (2019) ASTM D4870-22 IP 390:2011 (2017)
	Determination of flash point (°C)	ASTM D93-25 ISO 2719: 2016 & Amd1: 2021
	Determination of CCAI (Calculated Carbon Aromaticity Index) for petroleum products	ISO 8217:2024
	Determination of Density by Digital Density Meter - Oscillating U-tube method	ASTM D4052-22 ISO 12185:2024
	Determination of water content by distillation (% mass)	ASTM D95-23 E1 ISO 3733:1999 (2021)
	Determination of pour point (°C)	ASTM D97-17b (2022) ISO 3016:2019 (2024)
	Determination of Al, Si, V, Ni, Fe, Na, Ca, Zn, P in residual fuel oil (mg/kg)	IP 501:2005 (2019)

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1. Petroleum products	Determination of ash (% mass)	ISO 6245:2001 (2023) ASTM D482-19e1
	Determination of cold filter plugging point (CFPP) (°C)	EN 116:2015 ASTM D6371-24 IP 309:2016
	Determination of hydrogen sulfide in liquid phase (H ₂ S) (mg/kg)	IP 570:2015 (2021) Procedure A ASTM D7621-16 (2021)
	Determination of carbon residue – method (MCR) (% m/m)	ASTM D4530-25 ISO 10370:2014 (2020)
	Distillation of Petroleum Products at Reduced Pressure (%vol, °C)	ASTM D1160-24
	Determination of Bromine Number (grBr ₂ /100 g)	ASTM D1159-23
	Determination of Acid Number by Potentiometric Titration (mgKOH/g)	ASTM D664-24
	Determination of water by coulometric Karl Fischer titration	ASTM D6304-25 ISO 12937:2000
	Determination of aromatic hydrocarbon types	ASTM D6591-19 EN 12916:2024
	Distillation of petroleum products at atmospheric pressure	ASTM D86-23ae2 ISO 3405:2019
2a. Low-alloy steel	Determination of C, Si, Mn, P, S, Cr, Ni, Mo, Cu	ASTM E415-21
2b. Aluminum and aluminum alloys	Determination of Cd, Cr, Cu, Fe, Mg, Mn, Ni, Pb, Si, Sn, Zn, Ti, V	ASTM E1251-24
2c. Copper and copper alloys	Determination of Al, As, Co, Cr, Fe, Mn, Ni, P, Pb, S, Sb, Si, Sn, Zn, Ag, Bi	EN 15079:2015
3a. Potable water	Determination of pH	ISO 10523:2008 (2023)
	Determination of conductivity (µS/cm)	ISO 7888:1985 (2023)
	Determination of nitrate (mg/L)	In house method T.M. 42 based on ISO 23696-1:2023
	Determination of turbidity (NTU)	ISO 7027-1:2016 (2021)
	Determination of Chloride as Cl ⁻ (mg/L)	ISO 9297:1989 (2021)
	Determination of Chlorite & Chlorate Concentration (µg/L)	EPA METHOD 300.1 Rev.1 (1999)
	Determination of fluoride (F ⁻), chloride (Cl ⁻), nitrate (NO ₃ ⁻), nitrite (NO ₂ ⁻), bromide (Br ⁻), ortho-phosphate (PO ₄ ³⁻) and sulfate (SO ₄ ²⁻) (mg/L)	ISO 10304-1:2007
	Determination of ammonium ions (NH ₄ ⁺) (mg/L)	ISO 14911:1998
	Determination of heavy metals As, Cd, Cr, Cu, Fe, Mn, Ni, Pb, Se, Zn (µg/L)	ISO 17294-1:2024 ISO 17294-2:2023
	Determination of the sum of calcium and magnesium – EDTA titrimetric method	ISO 6059:1984

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3b. Ballast water	Determination of total residual oxidant (TRO) as TRC (mg/L)	ISO 7393-2: 2017 (2023)
	Determination of Chlorite & Chlorate Concentration (µg/L)	EPA METHOD 300.1 Rev.1 (1999)
3c. Wastewater	Determination of total suspended solids (TSS) (mg/L)	APHA SM 2540D
3d. Cooling and coolant water	Determination of pH in engine coolants	ASTM D1287-11 (2020)
	Determination of chloride (Cl ⁻), nitrate (NO ₃ ⁻), nitrite (NO ₂ ⁻), ortho-phosphate (PO ₄ ³⁻) and sulfate (SO ₄ ²⁻) (mg/L)	ASTM D5827-22
4. Firefighting foams	Determination of PFAS (PFOS, PFNA, PFOA, PFHxS) perfluoroalkyl and polyfluoroalkyl substances (µg/L)	In house method T.M. 118 based on ISO 21675:2019
5. Reinforced plastic composites	Determination of the textile glass and mineral fillet content	EN ISO 1172:2023
6. Materials and articles in contact with foodstuffs – Plastics	Determination of overall migration of substances in evaporable simulants by total immersion, article filling, or using a cell	EN 1186-1:2002 EN 1186-3:2022
Mechanical tests		
Welds, metallic materials	Tensile test (Proof Strength not included)	EN ISO 6892-1:2019 EN ISO 15614-1:2017 & A1:2019 EN ISO 4136:2022 ASTM E8/E8M-25 EAOT 1421-3:2007 EN 10080:2005 EN ISO 15630-1:2019 ASME IX:2025 / QW 150 EN ISO 5178:2019
	Hardness test according to the Vickers method	EN ISO 6507-1:2023 (HV-10, HV-30) EN ISO 9015-1:2011 ASTM E92-23
	Bend test	EN ISO 5173:2023 EN ISO 7438:2020 EAOT 934:1988 ASTM E290-22 ASME IX:2025 / QW 160 EAOT 1421-3:2007 EN 10080:2005 EN ISO 15630-1:2019
	Impact test according to the Charpy method	EN ISO 9016:2022 EN ISO 148-1:2016 (2023) ASME IX:2025 / QW 170
	Drift-expanding test in metallic tubes	EN ISO 8493:2004 ASTM A370-24a
	Flattening test in metallic tubes	EN ISO 8492:2013 ASTM A370-24a

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Welds, metallic materials	Hydrostatic testing of metallic materials (tubes, valves, gate valves)	EN 12266-1:2012 EN 10255:2004+A1:2007 EN 1074-1:2000
Welds, metallic and cast materials	Macroscopic and microscopic examination	EN ISO 17639:2022 EN ISO 6520-1:2007 (2021) ASTM E1351-01 (2020) ISO 15614-2:2025 ASME IX:2025 / QW 183
Reinforced plastic composites	Determination of tensile properties	EN ISO 527-1:2019 EN ISO 527-4:2023
	Determination of flexural properties	EN ISO 14125:1998 & A1:2011 EN ISO 178:2019

Site of assessment: **Laboratory permanent premises, Efplias 49, Piraeus, Greece.**

Approved Signatories: **N. Hatzopoulos, E. Mante, K. Berketis, M. Koukouli.**

This Scope of Accreditation replaces the previous one dated August 19th, 2024.

The Accreditation Certificate No. **65-8**, to ELOT EN ISO/IEC 17025:2017, is valid until 28.02.2031.

Athens, November 13th, 2025

