

Hellenic Accreditation System



Annex F1/21 to the Certificate No. **65-7**

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 D4294-21 ISO 8754: 2003 (2021)
	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 D 4870-22
	Determination of total sediment by thermal ageing, TSP (Procedure A) and chemical ageing, TSA (Procedure B) (% mass)	ISO 10307-2: 2009 (2019) IP 390: 2011 (2017) ASTM D 4870-22
	Determination of flash point (°C)	ASTM D93-20 ISO 2719: 2016 & Amd1: 2021
	Determination of CCAI (Calculated Carbon Aromaticity Index) for petroleum products	ISO 8217: 2017 Annex F
	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 ISO 3733: 1999 (2021)
	Determination of pour point (°C)	ASTM D97-17b (2022) ISO 3016: 2019
	Determination of Al, Si, V, Ni, Fe, Na, Ca, Zn 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 D482-19
	Determination of cold filter plugging point (CFPP) (°C)	EN 116: 2015 ASTM D 6371-24 IP 309: 2016
	Determination of hydrogen sulfide in liquid phase (H ₂ S) (mg/kg)	IP 570:2015 Procedure A ASTM D7621-16 (2021)
	Determination of carbon residue – method (MCR) (% m/m)	ASTM D4530-15 (2020) ISO 10370: 2014
	Distillation of Petroleum Products at Reduced Pressure (%vol, °C)	ASTM D 1160-18
	Determination of Bromine Number (g Br ₂ /100 g)	ASTM D1159-23
	Determination of Acid Number by Potentiometric Titration (mg KOH/g)	ASTM D664-18e2 (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 E1251-17a
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. Drinking 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 Q.P. 4.9.8-OE3
	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)
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

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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-24 ΕΛΟΤ 1421-3: 2007 EN 10080: 2005 EN ISO 15630-1: 2019 ASME IX: 2023 / 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 ΕΛΟΤ 934: 1988 ASTM E290-22 ASME IX: 2023 / QW 160 ΕΛΟΤ 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 ASME IX: 2023 / QW 170
Welds, metallic and cast materials	Macroscopic and microscopic examination	EN ISO 17639: 2022 EN ISO 6520-1: 2007 (2021) ASTME1351-01 (2020) ASME IX: 2023 / QW 183 EN ISO 15614-2: 2005
Reinforced plastic composites	Determination of tensile properties	EN ISO 527-1: 2019 EN ISO 527-4: 2023
Materials and articles in contact with foodstuffs — Plastics	Determination of flexural properties	EN ISO 14125: 1998 (2013) & A1: 2011 EN ISO 178: 2019
	Determination of the textile glass and mineral fillet content	EN ISO 1172: 2023
	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

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 2nd, 2022.

The Accreditation Certificate No. **65-7**, to ELOT EN ISO/IEC 17025: **2017**, is valid until **28.02.2026**.

Athens, August 19th, 2024

