

# Hellenic Accreditation System



Annex F1/20 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
<b>Chemical tests</b>		
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 <sup>2</sup> /s, cSt)	ASTM D445-21e1 ISO 3104: 2020
	Determination of total sediment by hot filtration, TSE (% mass)	ISO 10307-1:2009 (2019) ASTM D 4870-18
	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 4870-18
	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 D4052-18a ISO 12185: 1996
	Determination of water content by distillation (% mass)	ASTM D95-13 (2018) ISO 3733: 1999 (2021)
	Determination of pour point (°C)	ASTM D97-17b 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 (2018) ASTM D482-19
	Determination of cold filter plugging point (CFPP) (°C)	EN 116: 2015 ASTM D 6371-17a IP 309: 2016
	Determination of hydrogen sulfide in liquid phase (H <sub>2</sub> 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
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
3. Water (drinking, surface, wastewater)	Determination of pH	ISO 10523: 2008 (2017)
	Determination of conductivity (µS/cm)	ISO 7888: 1985 (2017)
	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 total suspended solids (TSS) (mg/L)	APHA SM 2540D
	Determination of total residual oxidant (TRO) (mg/L)	ISO 7393-2:2017
<b>Mechanical tests</b>		
Welds, metallic materia	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-21 EΛOT 1421-3: 2007 EN 10080: 2005 EN ISO 15630-1: 2019 ASME IX: 2021 / QW 150 EN ISO 5178: 2019
	Hardness test according to the Vickers method	EN ISO 6507-1: 2018 (HV-10, HV-30) EN ISO 9015-1: 2011 ASTM E92-17
	Bend test	EN ISO 5173: 2010 & A1: 2011 EN ISO 7438: 2020 EΛOT 934: 1988 ASTM E290-14 ASME IX: 2021 / QW 160 EΛOT 1421-3: 2007 EN 10080: 2006 EN ISO 15630-1: 2019

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Welds, metallic materials (con.)	Impact test according to the Charpy method	EN ISO 9016: 2022 EN ISO 148-1: 2016 ASME IX: 2021 / QW 170
Welds, metallic and cast materials	Macroscopic and microscopic examination	EN ISO 17639: 2022 EN ISO 6520-1:2007 ASTM E1351-01 (2020) ASME IX:2021 / QW 183 EN ISO 15614-2:2005
Reinforced plastic composites	Determination of tensile properties	EN ISO 527-1: 2019 EN ISO 527-4: 2021
Materials and articles in contact with foodstuffs — Plastics	Determination of flexural properties	EN ISO 14125: 1998 & A1: 2011 EN ISO 178: 2019
	Determination of the textile glass and mineral fillet content	EN ISO 1172: 1999
	Overall migration of substances in food simulants (aqueous, ethanol 95%, isooctane) by total immersion or article filling	EN 1186-1: 2002 EN 1186-3: 2002 EN 1186-9: 2002 EN 1186-14: 2002

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 February 7th, 2022.

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

Athens, August 2<sup>nd</sup>, 2022

