

Hellenic Accreditation System



Annex F1/14 to the Certificate No. 232-6 SCOPE of ACCREDITATION

of the
Laboratory of Agricultural and Chemical Analyses
of
ARAL Co Ltd

Tested materials/ products	Types of test/ Properties to be measured	Applied standards/ Techniques to be used
Chemical testing		
Drinking Water and Groundwater whether or not for human consumption	1. Determination of Cl ⁻ anions	ISO 9297:1989
	2. Determination of total and composite alkalinity	ELOT EN ISO 9963.01:1996
	3. Electrometric determination of pH	ELOT 658:1983
	4. Determination of electrical conductivity	ELOT EN 27888:1993
	5. Determination of total calcium and magnesium content (total hardness)	ELOT 170:1980
	6. Determination of calcium, magnesium, sodium, and potassium	Internal method based on ISO 14911:1998, by ion chromatography (OE.046)
Wastewater	1. Electrometric determination of pH	ELOT 658:1983
	2. Determination of electrical conductivity	ELOT EN 27888:1993

Tested materials/ products	Types of test/ Properties to be measured	Applied standards/ Techniques to be used
Dolomites and other calcareous minerals-Liming materials	1. Determination of calcium oxide	ASTM C 25:2019
	2. Determination of magnesium oxide	
	3. Determination of loss on ignition (1000 °C)	
Anhydrous or hydrate sodium carbonate (soda ash)	Sodium carbonate for industrial use. Determination of total soluble alkalinity. Titrimetric method	ISO 740 -1976
Glass hollow ware and Ceramic ware	Determination of the release of lead and cadmium	Internal method based on ISO 7086-1:2019 and method of Greek Food Code (art.25) by AAS(OE.016)
Glasses of soda-lime-magnesia- silica type	1. Determination of sodium oxide	Internal method based on a) BS 2649-1:1988 b) Analysis of glasses using atomic absorption and atomic emission spectrometry, Report by International Commission on Glass, Technical Committee 2, (Glass Technology, Vol. 60, No 5 -1987) with FAAS (OE.040)
	2. Determination of potassium oxide	
	3. Determination of calcium oxide	
	4. Determination of magnesium oxide	
	5. Determination of aluminum oxide	
	6. Determination of iron oxide	
	7. Determination of chromium oxide	
Soil	1. Determination of pH	ISO 10390:2021
	2. Determination of electrical conductivity	ISO 11265:1994
	3. Determination of water-soluble calcium, magnesium, sodium, potassium	Internal method based on ISO 11265:1994 (extraction) and ISO 14911:1998, by ion chromatography (OE.044, 046)

Tested materials/ products	Types of test/ Properties to be measured	Applied standards/ Techniques to be used
Fertilizers	1. Determination of ammoniacal nitrogen	Regulation (EC) 2003/2003 EN 15475:2009
	2. Determination of nitrate nitrogen and total nitrate and ammoniacal nitrogen	Regulation (EC) 2003/2003 EN 15476:2009
	3. Determination of extracted phosphorus, by Quinoline phosphomolybdate gravimetric method	Internal method based on ISO 6598:1985 & Regulation (EC) 2003/2003, EN 15959:2011 (OE.22)
	A. Extraction of phosphorus soluble in mineral acids	Internal method based on ISO 7497:1984 & Regulation (EC) 2003/2003 EN 15956:2011(OE.019)
	B. Extraction of phosphorus soluble in neutral ammonium citrate	Internal method based on Regulation (EC) 2003/2003 EN 15957:2011 (OE.020)
	C. Extraction of phosphorus soluble in water	Internal method based on ISO 5316:1977 & Regulation (EC) 2003/2003 EN 15958:2011(OE.021)
	4. Determination of water-soluble potassium - potassium tetraphenylborate method	Internal method based on ISO 5317:1983 & Regulation (EC) EN 15477:2009 (OE.023)
5. Determination of water-soluble potassium content by flame atomic absorption spectrometry	Internal method based on ISO 5317:1983 & Regulation (EC) 2003/2003 EN 15477:2009 & APHA 3111 B (OE.027)	
6. Determination of total magnesium by atomic absorption spectrometry	Regulation (EC) 2003/2003 EN 15960:2011 & EN 16197:2012	

Tested materials/ products	Types of test/ Properties to be measured	Applied standards/ Techniques to be used
Microbiological Testing		
Drinking Water, surface and swimming pool water	1.Enumeration of Total Coliforms	ISO 9308-1:2014/ Amd1 :2016
	2.Enumeration of Escherichia Coli	ISO 9308-1:2014/ Amd1 :2016
	3.Detection and enumeration of intestinal enterococci	ISO 7899-2:2000
	4. Enumeration of culturable microorganisms at 22 ± 2 °C and at 36 ± 2 °C	ISO 6222:1999
Surface water, drinking water, swimming water, coolers water & environmental waters (water from cooling towers, process water, water from dental units, water from air condition etc)	Detection and enumeration of <i>Legionella</i> spp.	ISO 11731: 2017
Processed Wastewater	1.Enumeration of Total Coliforms	ISO 9308-1:2014/ Amd1 :2016
	2.Enumeration of Escherichia Coli	ISO 9308-1:2014/ Amd1 :2016

Site of assessment: **Laboratory permanent premises, Aghios Joannis, Stefani, Aspropyrgos.**

Approved signatories: **K. Vasilopoulou, N. Vlastaras, M. Panteli.**

This scope of Accreditation replaces the previous one dated 30.08.2021.

The Accreditation Certificate No **232-6**, to ELOT EN ISO/IEC 17025:2017, is valid until 11.10.2025.

Athens, 16.12.2021

