CYPRUS ORGANIZATION FOR THE PROMOTION OF QUALITY
CYPRUS ACCREDITATION BODY

ACCREDITATION CERTIFICATE no. *L062-3*

The Board of Governors
of the Cyprus Organization for the Promotion of Quality
acting as the authorized Cyprus Accreditation Body
according to the Article 7 of the Law 156(I)/2002

grants accreditation

to

ARISTOS LOUCAIDES CHEMICAL LABORATORY LTD

in Nicosia

which has been assessed according to the Accreditation Criteria
for Testing Laboratories, as defined in the Standard

CYS EN ISO/IEC 17025:2017

and was found technically competent to carry out the **Tests** included in the Scope of Accreditation which is described in the **Annex** to this Certificate as an **integrated part of it. The Scope of Accreditation** can change only after approval from the Cyprus Accreditation Body.

The current Accreditation Certificate, no. *L062-3,* is issued on the **25th of January 2024 and it is valid from the 11th of July 2022 until the 10th of July 2026**.
Accreditation was awarded for the first time on the 11th July 2014.

Antonis Ioannou
Director

Date: 25th January 2024

This laboratory is accredited in accordance with the recognised International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management System (ISO-ILAC-IAF Communiqué,).

Annex

of the Accreditation Certificate number L062-3

Scope of Accreditation

of

ARISTOS LOUCAIDES CHEMICAL LABORATORY LTD

Valid from the 11th July 2022 till the 10th July 2026
*** Valid from the 27th January 2023 till the 10th July 2023**

Materials /Products tested	Types of test/Properties measured	Applied methods/ Techniques used
Chemical Testing		
Potable waters and Waste Waters	Chlorides	CW11 In House based on, APHA, 23rd Ed 2017:4500, titrimetric method B
	Electrical conductivity Resistivity (by calculation)	CW02 In House based on APHA, 23rd Ed 2017:2340C
	pH	CW01 In House based on APHA, 23rd Ed 2017:4500-pH value A and B
	Total Hardness	CW03 In House based on APHA, 23rd Ed 2017:2340C:EDTA Titration
	Total suspended solids	CW43 In House based on APHA, 23rd Ed 2017:2540D
Potable waters, Waste waters Bore hole waters	Calcium	CW23 based on APHA, 23rd Ed 2017:3500-Ca B EDTA Titrimetric method
	Magnesium (by calculation)	CW24 In House based on APHA, 23rd Ed 2017:3500 - Mg B (Calculation)
	Nitrites	CW16 In House based on APHA, 23rd Ed 2017:4500 NO2 B Colorimetric method
	Soluble Reactive Phosphorus	CW17 In House based on APHA, 23rd Ed 2017:4500-P E Ascorbic acid method
	Ammonia	CW25 In House based on APHA, 23rd Ed 2012:4500-NH_3-C Nesslerization method.
	Alkalinity	CW13/14 Titrimetric method In House based on APHA, 23rd Ed 2017
	Sulphate	CW12 based on APHA, 23rd Ed 2017 method 4500-SO4 2-E using HACH Spectrophotometer
	Turbidity	CW50 In House based on APHA, 23rd Ed 2017 method 2310B by

Potable Waters		Nephelometry
	Fluoride	CW18 In House based on APHA, 23rd Ed 2017 method 4500 F- D using Spectrometry
Potable waters	Trihalomethanes (THMs): Chloroform Bromodichloromethane Dibromochloromethane Bromoform	CW69 In House based on APHA, 23rd Ed 2017 method 6232B via liquid-liquid extraction & GC-ECD determination
Potable and Borehole waters	Sodium Potassium	CW21/22 In House based on APHA, 23rd Ed 2017 method 3500-Na B and 3500-K B by Flame Photometry
	Sodium Adsorption ratio (SAR) by calculation	CW04 – In house documented method based on 'Water Quality for Agriculture' of the FAO (Food and Agriculture Organisation of the United Nations) Irrigation and Drainage paper 29, rev.1, 1985.
Potable, Surface and Borehole waters and treated effluent	Nitrate	CW15 In House based on APHA, 23rd Ed 2017 4500 NO^{3-} B using UV Spectrophotometry
Potable and Borehole waters	Dissolved Metals: Aluminium Iron Manganese Copper Zinc Lead	CW35 In House based on APHA, 23rd Ed 2017 method 3120 B by ICP-OES determination
Potable, Surface and Borehole waters, wastewaters and seawater	Dissolved metals: Boron Iron	CW35A In House based on APHA, 23rd Ed 2017 method 3120 B by ICP-OES determination
Potable waters and Swimming pool waters	Total Dissolved Solids (TDS)	CW44 In House based on APHA, 23rd Ed 2017 method 2540C using gravimetric techniques
Potable, Surface and Borehole waters, Sea water and treated	Total organic carbon (TOC) and Dissolved organic carbon (DOC)	CW45 based on APHA, 23rd Ed 2017 test method 5310B*

effluent		
Potable and swimming pool waters	Langelier Saturation Index (LSI) by calculation	CW05 – in house documented method in reference to Benefield, L., Judkins, J. & Weand, B. 1982. *Process Chemistry for Water and Wastewater Treatment*. Prentice-Hall Inc., Englewood Cliffs, New Jersey.
WASTEWATERS (Treated and Untreated)	Total Phosphorus	CW48 In House based on APHA, 23rd Ed 2017 method 3120 B by a digestion step followed by measurement on ICP-OES
WASTEWATERS (Treated and Untreated)	Dissolved Metals: Cadmium (Cd) Nickel (Ni) Vanadium (V) Cobalt (Co) Chromium (Cr) Lead (Pb) Copper (Cu) Zinc (Zn) Iron (Fe)	CW35B In House based on APHA, 23rd Ed 2017 method 3120 B by ICP-OES
WASTEWATERS (Treated and Untreated)	Arsenic (As)	CW36 In House based on APHA, 23rd Ed 2017, method 3114 Hydride generation and 3120 B ICP-OES determination
WASTEWATERS (Treated and Untreated)	Total Nitrogen	CW47A In House based on ISO 11905-1:1997 by digestion at 120°C & determination by UV/Vis spectrophotometry at 525 nm
CONCRETE	Chloride content	CC02 based on BS 1881:Part 124:1988
FINE CONCRETE AGGREGATES	Water Soluble Chloride	CS40 based on CYS EN 1744-1:2009, Part 7, (Volhard method)
SOIL	Electrical conductivity	CS02 based on Soil Analysis Handbook, Soil & Plant Analysis Council Inc 1999
	pH	CS01 based on Soil Analysis Handbook, Soil & Plant Analysis Council Inc 1999
SLUDGE	Metals: Cadmium Copper Nickel Zinc Lead Mercury Chromium	CS53 – In house documented method by microwave assisted digestion followed by measurement on ICP-OES
SLUDGE	Total Nitrogen	CS15 In House based on APHA, 23rd

		Ed 2017 method 4500-NH3-C Nesslerization methodology with determination by UV/Vis spectrophotometry at 425 nm
SLUDGE	Total Phosphorus	CS18 , In House based on APHA, 23rd Ed 2017 method 4500-P E ascorbic acid methodology with determination by UV/Vis spectrophotometry at 880 nm
Waste Waters	Chemical Oxygen Demand (COD)	CW40 , In House based on APHA, 23rd Ed 2017 method 5200 COD D by sealed tube digestion using spectrometry
Untreated and treated sewage effluent	Biochemical Oxygen Demand (BOD 5 day)	CW41, ISO 5815-1:2003
Treated Effluents	Fats, Oils and Greases (FOG)	CW42 , In House based on APHA, 23rd Ed 2017 test method 5520B
Potable waters	True and Apparent Colour in waters	CW53, CW53A In House based on based on APHA 2120C, 23rd Ed 2017 *
Potable, Surface and Borehole waters, wastewaters and seawater	B, Fe, Na, K, Ca, Mg	CW35A In House based on based on APHA, 23rd Ed 2017 method 3120 B by ICP-OES determination**
potable waters & swimming pool waters	CCPP (Calcium Carbonate Precipitation Potential) by calculation	CW05 calculation-based parameter Tetra Tech RTW Model version 2.0 AWWA*
Potable, Surface and Borehole waters, wastewaters and seawater, soils, concrete and fine concrete aggregates	Related Opinions and Interpretation for Chemistry test results and the use within the Environmental sector: Accreditation relates to the actual process by which opinions and interpretations are formulated	In house Technical policy ref: TP01
Microbiological Testing		
WATER (Potable, borehole, seawater,	Enumeration of Colony count at 37 °C and 22 °C	MW01 EN ISO 6222:1999 Also MW 18 in house method for bottle rinse water

wastewater, pool water and bottle rinse water)	Enumeration of Enterococci, confirmed	MW04 EN ISO 7899-2:2000 Also MW 18 in house method for bottle rinse water
WATER (Potable, borehole, seawater, pool water and bottle rinse water)	Enumeration of *Pseudomonas aeruginosa,* confirmed	MW05 EN ISO 16266:2008 Also MW 18 in house method for bottle rinse water
WATER (Drinking water, disinfected pool water, surface waters and finished water from drinking water treatment plants)	Enumeration of E. coli / Coliforms	MW38 membrane filtration ISO 9308-1:2014 using Chromogenic agar
Potable, Borehole, Waste and Swimming pool water and Seawater	Sulphite reducing clostridia, confirmed.	MW26 based on EN 26461-2:1993 ISO 6461/2:1986
Swimming Pool waters	Enumeration of Staphylococci	MW08A In House based on APHA 9213B-6:2017
Potable waters, Surface waters Borehole waters Waste and seawaters Swimming Pool waters and bottle rinse waters	Detection and enumeration of: Coliforms/E-coli or Faecal Coliforms	MW30 (IDEXX Quantiray) based on ISO9308-2:2012 and APHA 9223:2017 standard methods "Enzyme substrate coliforms test (total coliforms and E. Coli)" Also MW18 in house method for bottle rinse water

Potable, bottled, recreational and Borehole waters and treated effluent	Detection and enumeration of Enterococci	MW33 Enterolert/IDEXX – In House based on APHA 9230B and C (23nd edition) and ISO 7899-1,2
Water [including Sterilox Rinse Waters, Washer Disinfector Final Rinse Waters (Mains feed and Reverse Osmosis), Reverse Osmosis Water, Potable, Spa, Swimming Pool and Hydrotherapy Pool Waters], Domestic and Industrial Process Waters	Detection and Confirmation of Legionella spp and identification of Legionella pneumophila serogroups 1 & 2-15 and Legionella species	MW39/MW07 –Detection of Legionella based on ISO 11731:2017 and serotyping using latex agglutination
FOOD Meat and Meat products, Fish and Fishery products, Milk and Milk Products, products intended for human consumption and Animal feed	Aerobic Colony Count at 30°C	MF01 EN ISO 4833-1:2013

FOOD, FEEDSTUFFS	Detection of Salmonella spp	MF07A- AFNOR BIO 12/16 - 09/05, VIDAS Easy® Salmonella, bioMerieux
FOOD, FEEDSTUFFS	Detection of Listeria monocytogenes	MF06 AFNOR No. BIO-12/11 - 03/04, VIDAS® Listeria monocytogenes II (LMO2), confirmation with ALOA, bioMerieux
Sponge Swabs	Aerobic Colony Count at 30°C	MW19 – based on EN ISO 4833-1:2013 and EN ISO 18593:2004
Potable and Borehole waters, wastewaters and seawater, pool waters, domestic and industrial process waters, Food and feedstuffs	Related Opinions and Interpretation for microbiological test results and the use within the Environmental sector: Accreditation relates to the actual process by which opinions and interpretations are formulated	In house technical policy ref: TP01 based on EA-INF/13: 2019

Authorised person to sign test reports is Dr. Aristos Loukaides.

Authorised person to express Opinions and Interpretations is Dr. Aristos Loukaides.

General Remarks

This Annex refers only for testing that is carried out at the premises of the Laboratory, at the following address: 77C Larnaca Avenue, 2102, Aglantzia, Nicosia.

Antonis Ioannou
Director

Date: **25th January 2024**