Hellenic Accreditation System

HELLENIC ACCREDITATION SYSTEM

Annex F1/I17 to the Certificate No. **142**-6

SCOPE of ACCREDITATION
of the
A΄ Chemical Service of Athens
of the
General Chemical State Laboratory

Tested materials/ products	Types of test/ Properties to be measured	Applied Standards/ Techniques to be used
Molecular-Biological tests		
1. Foodstuffs and Feeding stuffs	Detection and Quantification of genetically modified organisms, within flexible scope of accreditation. List of Accredited Activities within the flexible scope of accreditation of ΜΕΘ 15 02 ΓΤΟ-3/ΕΥΕ: https://www.aade.gr/sites/default/files/2023-07/V_%CE%95%CE%9D%CE%A4_15_02_7_02_04-FLEX-ed-1_GMO_LISTOFACCREDITEDACTIVITIES.pdf	Detection and Quantification of genetically modified organisms using Real Time PCR method, based on • method B.9, ISO 21569:2005/Amd.1:2013**:** *«Detection of certain DNA sequences frequently used in genetically modified organisms and originating from the cauliflower mosaic virus (CaMV 35S promoter, P35S) as well as from Agrobacterium tumefaciens (T-NOS) in foodstuffs — Screening method* • method QL-ELE-00-016 (GMOMETHODS: EU DATABASE OF REFERENCE METHODS*):* **"***Qualitative PCR method for detection of cry1Ab/Ac gene"* • publication: Ingrid Scholtens et al*. "Practical Experiences with an Extended Screening Strategy for Genetically Modified Organisms (GMOs) in Real-Life Samples",* **J.** Agric. Food Chem. 2013, 61, 38, 9097–9109 • EURL-GMFF event-specific methods Method Code:ΜΕΘ 15 02 ΓΤΟ-3/ΕΥΕ

Tested materials/ products	Types of test/ Properties to be measured	Applied Standards/ Techniques to be used
Chemical testing		
1. Foodstuffs	1. Determination of Chloropropanols in Foodstuffs	*In-house method: ΜΕΘ 15 02 CP-GCMS* GC-MS, based on ΕΛΟΤ EN 14573:2005
	2. Determination of 2- and 3-monochloropropanediol fatty acid esters and glycidyl fatty acid esters	*In-house method:* *15 02 CPES-GES GCMS* IDGC-MS, based on AOCS, Official Method, Cd 29a-13
2. Foodstuffs	1.Determination of Cd, Pb	*In-house method:* 15 02 AAS F1 based on ELOT EN 14084:2003, ELOT EN 13604:2002 and AOAC 999.10:2000 with AAS with graphite furnace-Zeeman
	2. Determination of elements: Lead (Pb), Cadmium (Cd), Arsenic (As), Mercury (Hg), Tin (Sn), Nickel (Ni), Iron (Fe), Copper (Cu), Aluminium (Al), Zinc (Zn)	In-house method with inductively coupled plasma mass spectrometry (ICP-MS), based on EN 15763:2009. Method Code:15 02 ICP-MS/MS F
	3. Determination of Acrylamide	In-house method with LC-MS/MS, LC-HRAM-MS, based on K. Mastovska, S.J. Lehotay. “Rapid Sample Preparation Method for LC-MS/MS or GC-MS Analysis of Acrylamide in Various Food Matrices”, J. Agric. Food Chem. 2006, 54, 7001-7008 and Document SANTE/11312/2021v2 Method Code: ACR-LC-MS/MS
3. Fats and oils, Meat and meat products, Cheese, Fishes, Milk powder, Dried fruits, Spices, Infant formulas, Food supplements, Cocoa beans and its products	1.Determination of polycyclic aromatic hydrocarbons in foodstuffs	*In-house method: ΜΕΘ 15 02 PAHS-HPLC/GC- MS* HPLC_UV-VIS Fluorescence Detection and GC-MS based on ISO15753: 2016
4. Animal by-products	1. Determination of glycerol triheptanoate (GTH) in processed animal by-products	*In-house method: ΜΕΘ15 02 GTH* GC-MS GC-MS, based on “Determination of glycerol triheptanoate (GTH) in processed animal by-products by gas chromatography” 6th Ed. JRC Technical Notes, EU, 2012
5.Foods of plant origin	1.Determination of nitrogen and proteins (% w/w)	*In-house method:* Kjeldahl system based on ISO 20483/2013

Tested materials/ products	Types of test/ Properties to be measured	Applied Standards/ Techniques to be used
		Method Code:15 01 PROTEINS
6. Edible plant fats and oils	1. Determination of free fatty acids	Regulation (EU) 2022/2105, Annex I, entry No 1, as in force Method Code: 15 01 Λ1
	2. Determination of peroxide value	Regulation (EU) 2022/2105, Annex I, entry No 2, as in force Method Code: 15 01 Λ3
	3. Determination of fatty acid methyl esters	Regulation (EU) 2022/2105, Annex I, entry No 6, as in force Method Code: 15 01 Λ6
	4. Total sterols, sterol composition, erythrodiol, uvaol	Regulation (EU) 2022/2105, Annex I, entry No 8, as in force Method Code: 15 01 Λ8
	5. Fatty acid ethyl esters, waxes	Regulation (EU) 2022/2105, Annex I, entry No 7, as in force Method Code: 15 01 Λ11
	6.Stigmastadienes	Regulation (EU) 2022/2105, Annex I, entry No 9, as in force Method Code: 15 01 Λ13
7. Olive oils and pomace oils	1. Spectrophotometric analysis in the ultraviolet	Regulation (EU) 2022/2105, Annex I, entry No 4, as in force Method Code: 15 01 Λ2
	2. Determination of triacylglyceroles with ECN42 - ΔECN42	Regulation (EU) 2022/2105, Annex I, entry No 10, as in force Method Code: 15 01 Λ7
8. Alcohol, spirit drinks, alcoholic products, wine	1. Determination of alcoholic strength	In house method based on Regulation (EC) 2870/2000 and on the Compendium of International Methods Of Analysis-OIV, method OIV-MA-AS312-01A by electronic densimeter Method Code: 15 04 ΑΠ 4
9. Alcohol, spirit drinks	1. Determination of volatile congeners-	In house method based on Regulation (EC) 2870/2000 by Gas Chromatography Method Code: 15 03 ΑΠ 5
	2. Determination of phthalates esters	In house method based on J. AOAC Int., 1995, 78(3), 730, by HPLC Method Code: 15 04 ΑΠ 10

Tested materials/ products	Types of test/ Properties to be measured	Applied Standards/ Techniques to be used
	3. Determination of the ^{14}C content	In-house method based on E.E.C. Reg. 2870/2000 [Annex XI - E.E.C. Reg. 2023/383] and on Compendium of International Methods of spirituous beverages of viti-vinicultural origin OIV method OIV-MA-BS-24, Liquid Scintillation Counter Method Code: 15 04 ΑΠ 9
10. Wine	1. Determination of total sulfur dioxide	In house method based on the Compendium Of International Methods Of Analysis-OIV, method OIV MA-AS323-04A, by titration. Method Code: 15 03 OI 1
11. Wine, aromatised wine products	1. Determination of total acidity	In house method based on the Compendium of International Methods Of Analysis-OIV, method OIV MA-AS313-01 by titration. Method Code:15 04 OI 2
12. Wine, drinks from fermentation of C.N.code 22.06	1. Determination of volatile acidity	In house method based on the Compendium of International Methods Of Analysis-OIV, method OIV MA-AS313-02 by titration Method Code:15 04 OI 4
13. Spirit drinks, wine	1. Determination of sugars	In house Method based on Regulation (EC) 2870/2000 and on the Compendium of International Methods Of Analysis-OIV, method OIV-MA-AS311-03 by HPLC Method Code: 15 04 ΑΠ 11
14. Alcohol, spirit drinks, wine	1. Determination of ^{13}C / ^{12}C ratio by isotope mass spectrometry (IRMS)	In-house Method, based on Compendium of International Methods of Wine and Must Analysis OIV, method OIV-MA-AS 312-06 and Compendium of International Methods of spirituous beverages of viti-vinicultural origin OIV, method OIV-MA-BS-22 by EA- IRMS Method Code: 15 04 ΑΠ 12
15.Alcoholic products	1. Determination of the Ethyl Alcohol content	In-house Method, by GC/FID, based on the method with code 143 of the compendium ILIADe of the Customs Laboratories of the European Network(CLEN). Method Code: 15 04 MA-1
15.Alcoholic products (cont.)	2. Determination of 2- propanol (IPA) and methyl-ethyl- ketone (MEK)	In-house Method, by GC/FID, based on the method with code 453 of the compendium ILIADe of the Customs Laboratories of the European Network (CLEN)

Tested materials/ products	Types of test/ Properties to be measured	Applied Standards/ Techniques to be used
		Method Code: 15 04 MA-2
	3.Determination of denatonium benzoate (Bitrex) in alcohol products	In-house Method, by HPLC-UV, based on the method with code 280 of the compendium ILIADe of the Customs Laboratories of the European Network (CLEN) Method Code: 15 04 MA-3
16. Chilli peppers and chilli products, mixes of spices, sauces	1. Determination of illegal dyes: 1. SUDAN I 2. SUDAN II 3. SUDAN III 4. SUDAN IV 5. SUDAN BLACK B 6. SUDAN RED G 7. SUDAN RED 7B 8. SUDAN ORANGE G 9. ORANGE II 10. RHODAMINE 11. DIMETHYL YELLOW 12. PARA RED 13. TOLOUIDINE RE	In-house method based on Method of European Commission Notification 03/92 by LC-MS/MS Method Code: 15 01 ILLEGAL DYES
17. Foods of plant origin	1. Determination of sugars	In-house method based on Harmonised Methods of the International Honey Commission, (IHC), 2009, by HPLC Method Code: 15 01 M 5
	2. Determination of sucralose	In-house method by HPLC/RID, based on SOP FFF/B1-3010 της LGC. Method Code: 15 00 01 01 SUCRALOSE
18. Foods of plant origin, sweeteners	1. Determination of acesulfame potassium, saccharin, aspartame and caffeine	In-house method based on ΕΛΟΤ EN 12856:1999, by HPLC Method Code: 15 01 ΓΛΥΚΑΝΤΙΚΑ
18.Foods soluble in water (including drinks, jams, syrups, confectionery)	1. Determination of water soluble food colors content	In-house method by HPLC Method Code: 15 02 COLOURS
19.Bakery products, beverages, non-alcoholic drinks, juices and other fruit drinks, marmalades, jams, tomato products, vegetable and fruit products, salad dressings and sauces	1. Determination of Benzoates and Sorbates content	In-house method based on Method § 35,00.00-9 of LMGB (Lebensmittel Bundes Gesetz) by HPLC Method Code 15 01 SaBa

Tested materials/ products	Types of test/ Properties to be measured	Applied Standards/ Techniques to be used
20.Foods of plant origin (Vegetable and fruit products, syrups, food stimulants)	1. Determination of Sulphur dioxide and Sulphites content	In-house method based on Method D3 of Greek Food Code Part B' by titrimetry Method Code: 15 02 S-1
21.Cereals and cereal products	1. Determination of Moisture content	In-house method based on Method of Regulation (EE) 2016/1240 Part II and Greek Food Code, Part B', Method IB2 and ISO 712- 2009 by Gravimetry Method Code: 15 02 Y-1
	2. Determination of Ash content	In-house method based on Method of Regulation EU 234/2010 (L72/3-20.03.2010), Annex II and Greek Food Code, Part B', Method IB1 and ISO 2171- 2007 by Gravimetry Method Code: 15 02 T-900
22. Bakery products (brioches, cookies), breakfast Cereals, desserts	1. Determination of coumarin	In-house method by HPLC. Method Code: 15 01 KOYMAPINH
23. Beverages	1. Determination of cyclamic acid	In-house method by HPLC/DAD, based on ELOTEN 12857:1999. Method Code: 15 01 ΚΥΚΛΑΜΙΚΑ
24. Foods and beverages	1. Determination of plant toxins of aromatic plants	In-house method by GC-MS, based on "Determination of flavourings in Foodstuffs using GC-MS (2008)" Danish Veterinary and Food Administration, Region East, Food Chemistry Department Method Code: 15 01 ΤΟΞΙΚΕΣ ΟΥΣΙΕΣ ΑΡΩΜΑΤΙΚΩΝ ΥΛΩΝ
25. Honey 25. Honey (cont.)	1. Determination of Hydroxymethyl-furfural	In house Method, based on Harmonised Methods of the International Honey Commission, 2009, by Spectrometry, Method Code: 15 01 M9
	2. Determination of diastase activity with Phadebas	In house Method, based on Harmonised Methods of the International Honey Commission 2009, by Spectrometry, Method Code: 15 01 M7

Tested materials/ products	Types of test/ Properties to be measured	Applied Standards/ Techniques to be used
	3. Determination of sugars	In-house method based on Harmonised Methods of the International Honey Commission, (IHC), 2009, by HPLC Method Code: 15 01 M 5
	4. Melissopalynological analysis of honey Pollen analysis within flexible scope of accreditation List of Accredited Activities within the flexible scope of accreditation of ΜΕΘ 15 01 M16 EYE: https://www.aade.gr/sites/default/files/2024-11/ List_of_Accredited_Activities_FLEX_HONEY_ENGLISH.pdf	In-house Method, based on "Methods of Melissopalynology, J. Louveaux et al., Bee world 59, 1978" and "Harmonised Methods of Melissopalynology, W. von der Ohe et al., Apidologie 35 (2004) S18-S25", by Microscope Method Code: 15 01 M16 EYE
	5. Determination of electrical conductivity at 20 °C	In-house Method, based on Harmonised Methods of the International Honey Commission 2009 Method Code: 15 01 M12
	6. Determination of moisture content	In-house Method, by refractive index measurement, based on Harmonised Methods of the International Honey Commission 2009 Method Code: 15 01 M1
26. Honey, syrup, sugar	1. Determination of ^{13}C / ^{12}C ratio by isotope mass spectrometry (IRMS)	In-house Method, based on J. AOAC Official Methods 998.12, 984.23 and White, J. AOAC Internat. 75(3), (1992), 543-48,by EA- IRMS Method Code:15 01 IRMS
	2. Determination of ^{13}C / ^{12}C ratio by Liquid hromatography-Isotope Mass Spectrometry (LC-IRMS)	In-house Method, based on methods: - Cabañero et al., J Agric Food Chem 2006; 54:9719-9727 - Elflein and Raezke, Apidologie 2008; 39:574-587, by LC-IRMS Method Code:15 01 LC-IRMS
27.Food and water: Product categories: (as defined in SANTE 11312/2021 and ESYD Guideline for flexible scope -	1. Pesticide residues determination using flexible scope protocol of the analytes of the categories: organochlorines,organophosphates, triazines, pyrethroids, carbamates, neonicotinoids, triazoles,	Documented in-house multi-residue methods based on the Document SANTE 11312/2021of the European Commission, with:

Tested materials/ products	Types of test/ Properties to be measured	Applied Standards/ Techniques to be used
ESYD G-FYTOPROST/ 01/02/20-10-2016) 27.1. Fruit and vegetables with high water content 27.2. Fruit and vegetables with high acid and high water content 27.3. Cereals, pulses 27.4. Products with high sugar and low water content 27.5. Products of plant origin with high fat content 27.6. Milk and milk products 27.7. Meat and meat products 27.8. Eggs 27.9. Fat from food of animal origin 27.10. Water (potable, surface and ground water intended or not for human consumption) 27.11. Wines	dinitroanilines, amides, strobilourines, benzimidazoles, aryloxy-alkanoxy acids andmiscellaneous, and other contaminants. List of Accredited Activities within flexible scope of accreditation: STANDARD FORM: 15 02 7.02 01 https://www.aade.gr/sites/default/files/2023-07/IV_KATALOGOS_15027_02_01_PESTICIDES_ENGLISH.pdf	(a) LC-MS-MS (b) GC-MS-MS (c) LC-HRAM-MS (d) GC-HRAM-MS and Flexible Scope SOP: SOP 15 02 7.02 01/ FLEX
28. Fruit and vegetables with high water content, grains, cereals, flours and pulses	1.Determination of Dithiocarbamate Pesticides residues	In-house Method, with GC-MS/MS, based on the method of the COMMUNITY REFERENCE LABORATORY FOR SINGLE RESIDUE METHODS EURL -SRM “Analysis of Dithiocarbamate Residues in Foods of Plant Origin involving Cleavage into Carbon Disulfide, Partitioning into Isooctane and Determinative Analysis by GC-ECD” V.2, December 2009 Method Code: CS2-GC-MS/MS
29. Water and ‘soda-like’ non-alcoholic beverages	1.Determination of dissolved hexavalent chromium	Method 15-IC-CHRO: In-house method with ion chromatography / post column derivatization / UV/Vis spectrophotometry based on method EPA 218.6

Tested materials/ products	Types of test/ Properties to be measured	Applied Standards/ Techniques to be used
30. Water intended for human consumption, surface water and ground water	1.Determination of dissolved anions (F, Cl, Br, NO_3, PO_4, SO_4, NO_2) and cations (Na, K, Ca, Mg)	In-house, Ion Chromatographic Method (15-IC-W)
	2.Determination of Total Organic Carbon (T.O.C.)	In-house, Catalytic Oxidation – IR Spectrometric Method (TOC-W)
	3. Determination of dissolved Cr, Mn, Ni, Fe and Al	In-house, Inductively coupled plasma atomic emission spectroscopy Method (ICP-OES-W)
	4. Determination of elements: Boron (B), Aluminium (Al), Iron (Fe), Zinc (Zn), Chromium (Cr), Manganese (Mn), Tin (Sn), Copper (Cu), Vanadium (V), Cobalt (Co), Arsenic (As), Selenium (Se), Molybdenum (Mo), Antimony (Sb), Lead (Pb), Nickel (Ni), Cadmium (Cd), Mercury (Hg), Uranium (U)	In-house method with Inductively coupled plasma-mass spectrometry, based on ISO 17294-1:2024, ISO 17294-2:2023 Method Code: 15-ICP-MS/MS-W
	5. Determination of pH	Inhouse method, by electrometry, based on method 4500 H^+ of Standard Methods for the Examination of Water & Wastewater 24th Edition 2023 Method Code: 15-pH-W
	6. Determination of conductivity	Inhouse method, by electrometry, based on method 2510 of Standard Methods for the Examination of Water & Wastewater 24th Edition 2023 Method Code: 15- Cond-W
Immunological tests		
Foodstuffs	Determination of food allergens, within flexible scope of accreditation List of Accredited Activities within the flexible scope of accreditation of ΜΕΘ15 02 ΑΛΛ/ΕΥΕ-1: https://www.aade.gr/sites/default/files/2023-07/VI_ENT_1502702_06_AccreditedActivities_Method-Allergens-Flex.pdf	In-house ELISA method, within flexible scope of accreditation, according to EN 15633-1:2009 *Method code: ΜΕΘ 15 02 ΑΛΛ/ΕΥΕ-1*
Organoleptic tests		
Virgin olive oil	Organoleptic assessment	Regulation (EU) 2022/2105, Annex I, entry No 5, as in force

Tested materials/ products	Types of test/ Properties to be measured	Applied Standards/ Techniques to be used
		Method Code: 15 01 ΟΡΓΑΝΟΛΗΠΤΙΚΗ

Opinions and Interpretations

Fine bakery wares (cookies, brioches, etc)	Concerning submitted samples of fine bakery: (1) expression of opinions and interpretations concerning the categorization of the fine bakery product. (2) by application of the analytical methods of the Scope of the Accreditation of the laboratory, expression of opinions and interpretations about the safety of the fine bakery product (applied only to brioches).	In-house method HPLC/DAD. Method Code: 15 01 ΚΟΥΜΑΡΙΝΗ Regulations (EU) 178/2002, 1333/2008 and 1334/2008 Decision of the Supreme Chemical Council No 26 (FEK 4092/B/07.09.2021

Site of assessment: **Laboratory permanent premises: 16 A. Tsoxa str., 11521 Athens, Greece.**

Approved signatories: **I. Gardikis, N.Zoulis, E. Botitsi, Ch. Alexopoulos, N.Nikolis, C. Rizou, E.Papavasileiou, S.Iosifidou, O.Robokou, G.Karygiannis, Chr.Sakellariou, K. Bergele, T.Kourouli, S.Antoniou, E. Moschona, Em.Tsimas, Chr. Mastichiadis, K. Stathopoulou, N. Michopoulos, P. Blika, M. Vikentiou, N. Vergi, F. Mavroeidi, R. Zachari, C. Paschou, S. Koukiou, Em. Nikoloudakis, E. Paramera, I. Voutsas, K. Ypsilantis, C. Devetzioglou, M.Karagianni.**

This Scope of Accreditation replaces the previous one dated 31.10.2026
The Accreditation Certificate No. **142**-6, to ELOT EN ISO/IEC 17025:2017, is valid until 06.11.2028.

Athens, 14.07.2026

Evangelos Apostolos Konstantinou
CEO of ESYD