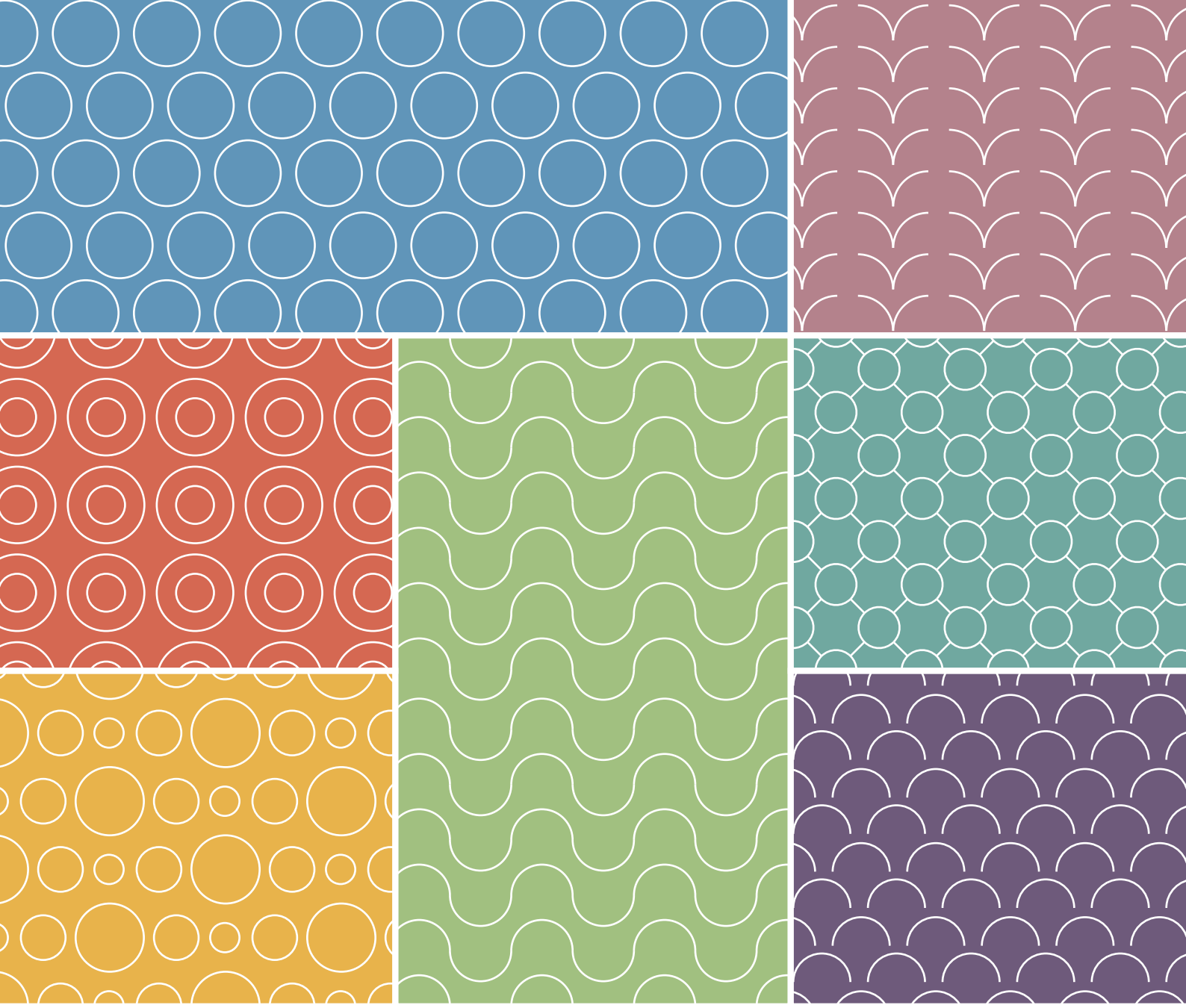


Proficiency Testing Schemes

ielab's programme 2023

Issue November 1st, 2022

Accredited Provider by ENAC according to ISO/IEC 17043
Check the accredited offer inside

ielab
Making quality control easy

Index

ielab: experience, commitment and quality

ielab is an international scope company dedicated to the provision of services and products for the application of quality in laboratories

Our commitment to quality and efficiency is demonstrated by our certifications and accreditations:

ISO 9001:2015 Certification of all the activities

Accreditation according to ISO/IEC 17043 Standard as Provider of Proficiency Testing Schemes, according to the scope of accreditation Nº 2/PPI007

Accreditation according to ISO 17034 Standard as Producer of Reference Materials (BACredi line), according to the scope of accreditation Nº 1/PMR001

Our services

Proficiency Testing Schemes

Kits for Molecular Diagnostic by qPCR

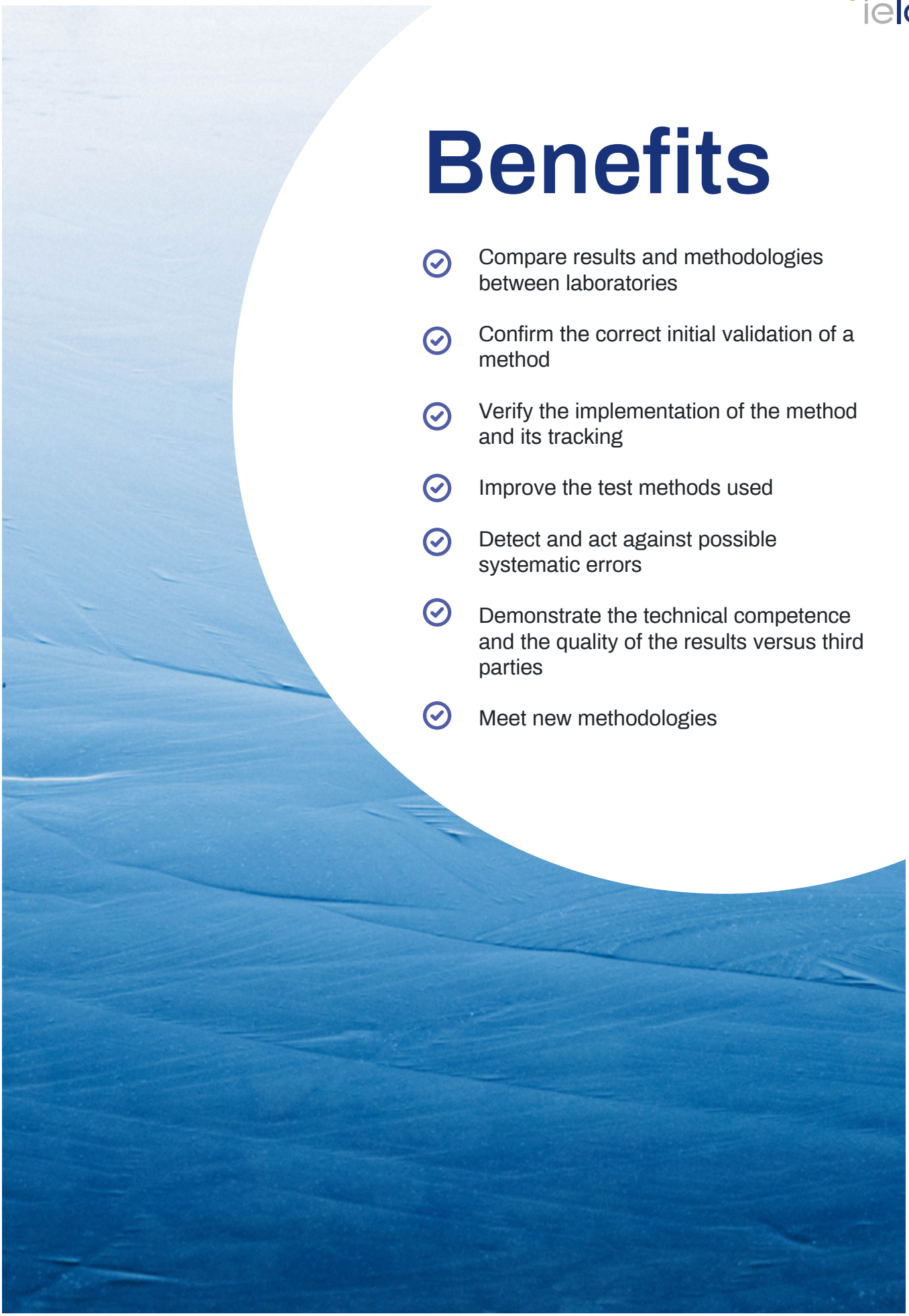
Microbiological and Physical-chemical Reference Materials

Technological solutions tailored to customer needs

Check and order online all our services: https://tienda.ielab.es/

Benefits

- Compare results and methodologies between laboratories
- Confirm the correct initial validation of a method
- Verify the implementation of the method and its tracking
- Improve the test methods used
- Detect and act against possible systematic errors
- Demonstrate the technical competence and the quality of the results versus third parties
- Meet new methodologies



Why ielab?

Trust, experience and reliability

>1.600
participants
cared for in
60 countries

Specific
management
software
for statistics

Custom reports

>20 years
organizing Proficiency
Testing Schemes

Highly
qualified
staff

25
Proficiency Testing
Schemes

46
rounds/year

11
matrices

>320
microbiological and
physical-chemical
parameters

Downloading of
participation
certificates

Robustness
of the
schemes

Compliance
requirements
ISO 17043
and 13528
standards

Participants
from various
sectors and
typologies,
national and
international

Closeness
to the customer

Specialized and
personalized
attention

Information management systems

Website

www.ielab.es

- Rounds registration
- Instructions
- Results and reports
- Certificates

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https://tienda.ielab.es

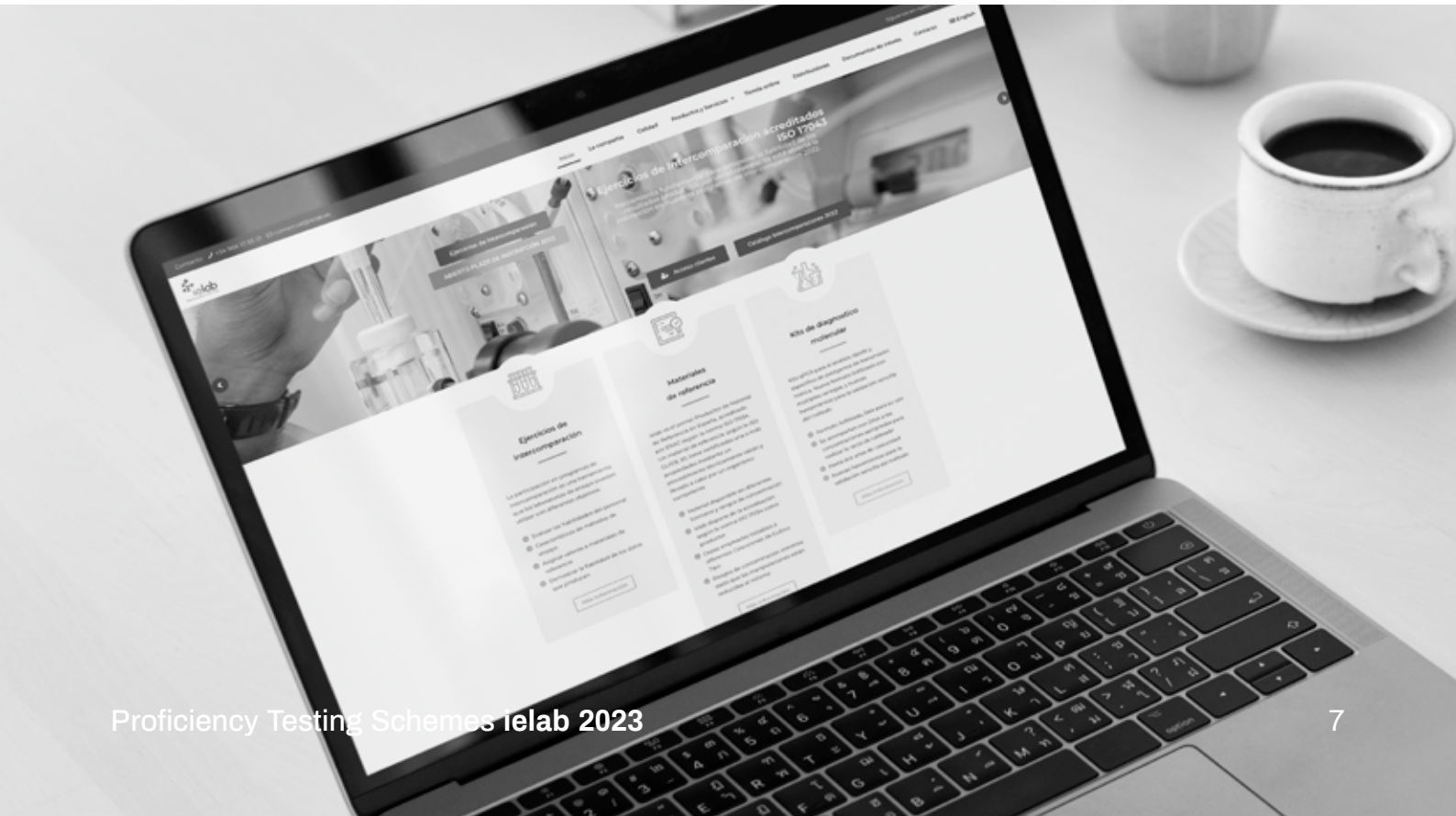
- Reference materials
- Molecular biology solutions
- Customized R&D services

Statistical data processing software

- Speed and automation
- General and custom reports

Software for PTS management

- Customer data
- Invoicing



Our process

1 Design

- Design based on new laws and needs
- Strains from environmental isolates, study of possible interferences and use of false positives/false negatives

2 Sample Preparation

- Natural or spiked samples and matrices
- Quality control carried out by accredited laboratories
- Studies of stability and homogeneity in laboratories ISO 17025 Standard

3 Sample Shipment

- Real simulation of shipping conditions for the microbiological rounds and control of temperature
- Advance online delivery of instructions and documentation

4 Reception of Results

- Results bulletin available online until the closing date
- Automatic email confirmation of the reported data
- Confidentiality of results thanks to a numerical code

5 Statistical Results Report

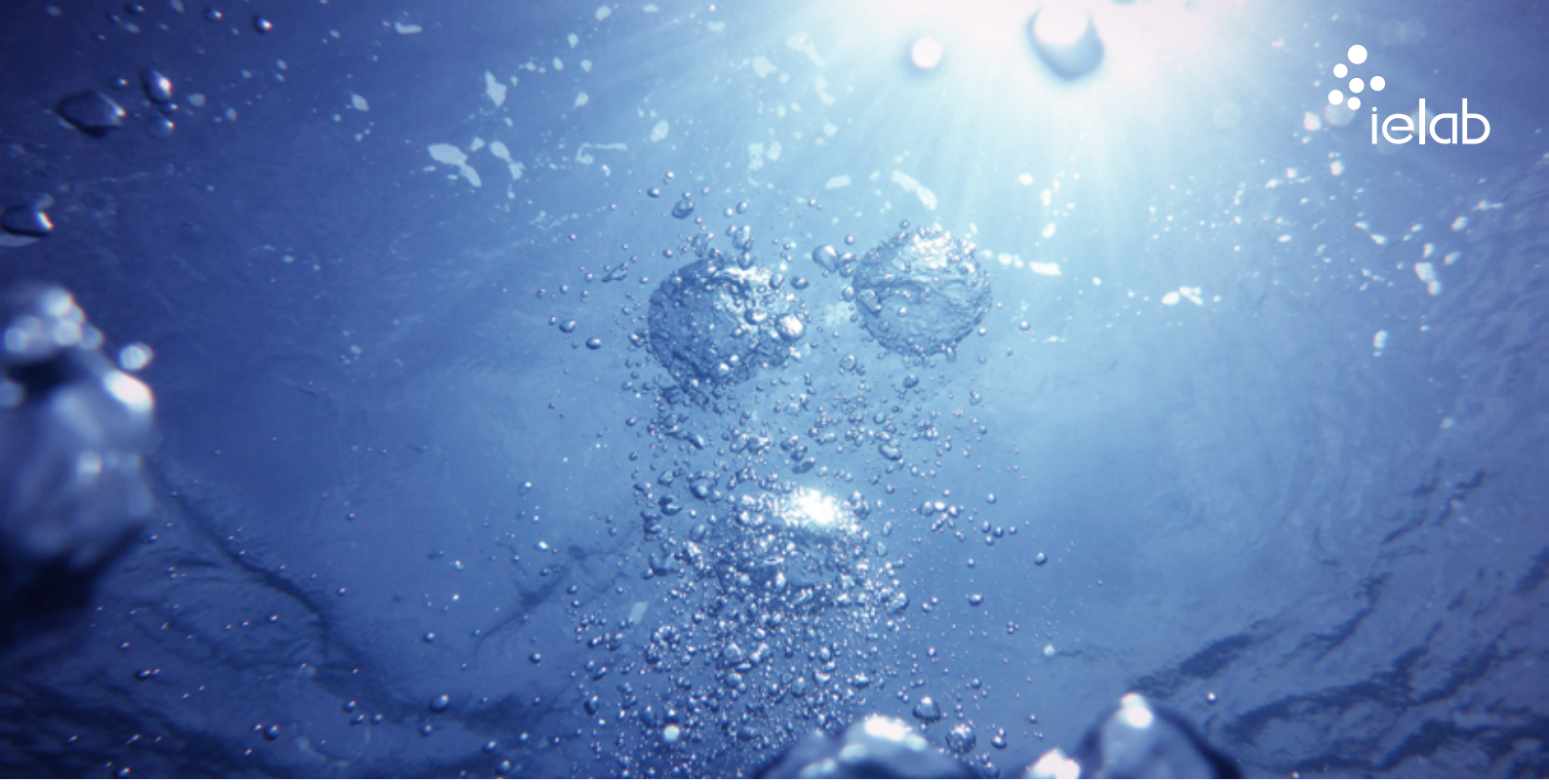
- Robust statistics according to the international guide ISO 13528
- z-score criteria for the evaluation of efficiency
- Automatic software for a quick reporting
- SDPA (σ_{pt}) obtained by history, calculation or according to legislation

6 Results Report

- Complete statistical reports: sample preparation and results by parameters
- Personalized report comparing own results with the global results

7 Personalized Assessment

- Qualified technical support: trained staff
- Tailored assistance to participants
- Consulting and manufacturing service according to customer needs



Promotions

5% early-bird discount

5% discount on the amount of all the rounds included in the order placed before December 25th, 2022. It is required to have participated in the 2021 and 2022 ielab rounds. Discount cumulative to other applicable promotions

5% discount for rounds increase

5% discount on the amount of all the rounds included in the order that exceeds the number of rounds contracted in 2022. Discount cumulative to other applicable promotions

10% discount for rounds increase belonging to the same matrix

10% discount for registration in rounds of the same matrix. Discount cumulative to other applicable promotions

15% discount

2 Rounds same scheme

15% discount on the amount of the 2 rounds of the same scheme

25% discount

3 Rounds same scheme

25% discount on the amount of the 3 rounds of the same scheme

See conditions of these promotions on page 53 of this catalogue

How to register in ielab's PTS

Access

Join our website (www.ielab.es) > CLIENT AREA

Registration

NEW CUSTOMERS: fill your profile through the "Clients Registration" section and get your credentials (username and password).

REGISTERED CUSTOMERS: access your profile on the "REGISTERED CLIENTS ACCESS" section with your usual credentials

Inscription

In the "Registration" option within your profile, you will find a table with all the rounds and schemes offered, where you can "Add" or "Remove" your choice and make your inscription

Confirmation

Click on "Accept" to get an assessment of selection, as "Pre-registration / quotation".

Formalize the order by pressing "Confirm".

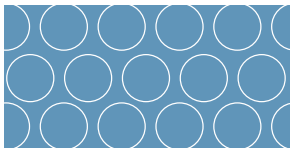
Payment options:

- By bank transfer once the invoice is issued
- By credit card at the time of registration

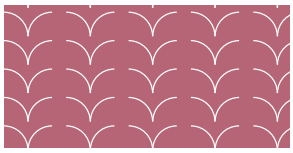
Checking

You will receive an email with a summary of the purchases. Otherwise, contact us at comercial@ielab.es.

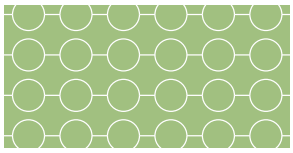
Proficiency Testing Schemes ielab 2023



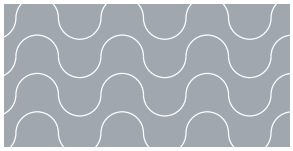
Drinking Water



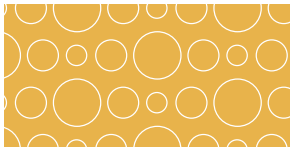
Continental Water



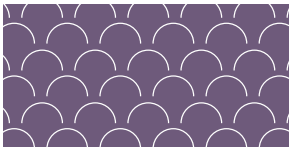
Wastewater



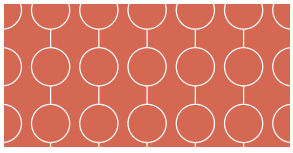
Sea Water



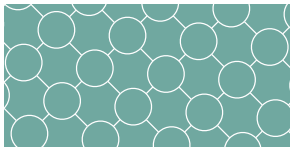
Atmosferic Pollution



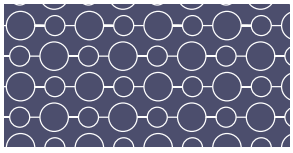
Solids



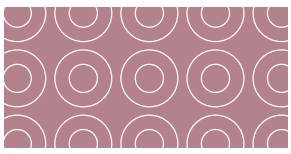
Legionella



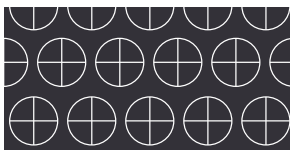
Bacteriophages



SARS-CoV-2



Cosmetics



in situ Analysis and Sampling

Drinking Water

Drinking Water

In Europe, the legal frame that regulates the quality of water intended for human consumption is based on the new European Directive (EU) 2020/2184, December 16th 2020.

For the purposes of this Directive 'water intended for human consumption' means

a) all water, either in its original state or after treatment, intended for drinking, cooking, food preparation or other domestic purposes in both public and private premises, regardless of its origin and whether it is supplied from a distribution network, supplied from a tanker or put into bottles or containers, including spring waters;

b) all water used in any food business for the manufacture, processing, preservation or marketing of products or substances intended for human consumption.

Our Proficiency Testing Schemes for Drinking Water include the main physical-chemical indicators and microbiological pathogens used to assess the quality of this type of water.

Driking Water: Physical-chemical A

[ref. 990001]

Round I	Round II	Round III
Week 9 ***27th February 2023***	*Week 21* ***22th May 2023***	*Week 38* ***18th September 2023***
Aluminium Ammonium Antimony Bicarbonates Boron **New** Cadmium Conductivity at 20ºC Magnesium Manganese Nitrates Sodium Uranium **New**	Arsenic Chlorides Colour Iron Mercury Nitrites Oxidability pH Potassium Selenium Zinc	Calcium Chromium Combined chlorine Copper Fluorides Free residual chlorine Lead Nickel Sulphates Total chlorine Turbidity

Metals will be determined as "total metals"

Driking Water: Physical-chemical B

[ref. 990002]

Round I	Round II	Round III
Week 9 ***27th February 2023***	*Week 21* ***22th May 2023***	*Week 38* ***18th September 2023***
Aldrin Aluminium Ametryn Ammonium Antimony Atrazine Benzo-a-pyrene Benzo-b-fluoranthene Bicarbonates Boron **New** Bromodichlorometane Cadmium Conductivity at 20ºC Dibromochloromethane 1,2-Dichloroethane Dieldrin Magnesium Manganese Nitrates Sodium 1,1,1-Trichloroethane Uranium **New**	Alfa-endosulfan Arsenic Benzene Benzo-g,h,i-perylene Bromoform Chloroform Chlorides Colour Heptachlor Iron Indeno-1,2,3-c,d-pyrene Mercury Nitrites Oxidability pH Potassium Propazine Selenium Terbutylazine Toluene Zinc	Benzo-k-fluoranthene Beta-endosulfan Calcium Chromium Combined chlorine Copper 4,4´-DDE Ethylbenzene Fluoranthene Fluorides Free residual chlorine Heptachlor epoxide Lead Nickel o-Xylene Simazine Sulphates Tetrachloroethene Total chlorine Trichloroethene Turbidity

Metals will be determined as "total metals"

Driking Water: Physical-chemical C

[ref. 990003]

Round I	Round II
Week 7 ***13th February 2023***	*Week 37* ***11th September 2023***
Barium Beryllium Bicarbonates Calcium Dry residue Hardness Vanadium	Anionic surfactants Cobalt Kjeldahl nitrogen Magnesium Silica Silver Total cyanides Total phosphorus

Metals will be determined as "total metals"

Driking Water: Physical-chemical D NEW

[ref. 992981]

Round I	Round II
Week 17 ***24th April 2023***	*Week 42* ***16th October 2023***
Acrylamide Bisphenol A Bromates Bromides Bromoacetic acid Chloroacetic acid Dibromoacetic acid Dichloroacetic acid Sum of Haloacetic acids (HAA) Total organic carbon (TOC) Trichloroacetic acid Vinyl chloride	Chlorates Chlorites 2,4-D Diuron Geosmin Isoproturon 2-Methylisoborneol (MIB) MCPA Microcystines Perfluorooctanesulfonic acid (PFOS) Perfluorooctanoic acid (PFOA) Sum of PFAS

Rounds not included in our accreditation by ENAC

Driking Water: Microbiology

[ref. 990019]

Round I	Round II	Round III
Week 7 ***13th February 2023***	*Week 20* ***15th May 2023***	*Week 37* ***11th September 2023***
Clostridium perfringens Culturable microorganisms at 22ºC Culturable microorganisms at 36ºC Enterococci *Escherichia coli* Faecal coliforms *Salmonella* spp. Total coliforms	*Clostridium perfringens* Culturable microorganisms at 22ºC Culturable microorganisms at 36ºC *Pseudomonas aeruginosa* Enterococci *Escherichia coli* Faecal coliforms Faecal estreptococci Total coliforms	*Clostridium perfringens* Culturable microorganisms at 22ºC Culturable microorganisms at 36ºC Enterococci *Escherichia coli* *Pseudomonas aeruginosa* *Staphylococcus aureus* Sulphite-reducing clostridia Total coliforms

Bottled Water: Microbiology

[ref. 990037]

Round I
Week 22 ***29th May 2023***
Clostridium perfringens Culturable microorganisms at 22ºC Culturable microorganisms at 36ºC *Pseudomonas aeruginosa* Enterococci *Escherichia coli* Sulphite-reducing clostridia Total coliforms

Continental Water

Continental Water

Within this group, it is possible to differentiate between treated and untreated continental water.

Among the latter are surface water (rivers, lakes, reservoirs...) and groundwater or catchment for human consumption located on land. Generally, the tests carried out in this type of matrix have as their ultimate objective the establishment of a framework for the protection of this type of water, as established by the Water Framework Directive (Law 62/2003, December 30th 2000).

Within the treated continental water, the water of swimming pools, cooling towers, evaporative condensers, or those for pharmaceutical use are included.

The technical-sanitary quality of swimming pools is regulated by different regulations in different countries, remaining in Spain under the protection of RD 742/2013. Our scheme includes the main indicators and microbiological pathogens used to control the quality of swimming pool water.

Continental Water: Microbiology

[ref. 990022]

Round I	Round II
Week 8 ***20th February 2023***	*Week 21* ***22th May 2023***
Enterococci *Escherichia coli* Faecal coliforms *Pseudomonas aeruginosa* *Salmonella* spp. *Staphylococcus aureus* Total coliforms	Enterococci *Escherichia coli* Faecal coliforms *Pseudomonas aeruginosa* *Salmonella* spp. *Staphylococcus aureus* Total coliforms

Swimming Pool Water: Microbiology

[ref. 990038]

Round I
Week 24 ***12th June 2023***
Escherichia coli Faecal coliforms Faecal estreptococci *Pseudomonas aeruginosa* *Staphylococcus aureus* Total coliforms

Wastewater

Wastewater

Wastewater is water of variable composition from many sources as domestic, municipal, industrial or agricultural, and for that reason it has been degraded or altered in its original quality.

All of them are usually collected in a collecting system and sent through a terrestrial emissary to a WWTP (Wastewater Treatment Plant). The aforementioned Directive 91/271/CEE establishes the parameters, limits or the reduction level that the treatment process must achieve.

In discharge authorizations (either to sanitation systems or to public domain) the parameters and limits of application are defined, depending on the raw materials, production process and quality requirements of the receiving environment. It will take into account compliance with the limits for priority and preferential substances in Directive 2008/105/EC. These parameters include mainly organic substances, cyanides, fluorides and metals.

According to the normative which establishes the legal framework for the reuse of treated water, reclaimed water is defined as: “The treated wastewater that has undergone a treatment process additional or complementary that allows to achieve the quality for their intended use”. This legislation establishes permitted uses, the frequency and quality criteria of this type of wastewater.

Wastewater: Physical-chemical

[ref. 990004]

Round I	Round II	Round III
Week 6 ***6th February 2023***	*Week 18* ***2th May 2023***	*Week 40* ***2th October 2023***
Aluminium Ammonium Biological oxygen demand (BO_5D) Chemical oxygen demand (COD) Fluorides Chlorides Chromium Nitrates Suspended solids Toxicity	Anionic surfactants Biological oxygen demand (BO_5D) Cadmium Chemical oxygen demand (COD) Chromium VI Orthophosphates Suspended solids Total organic carbon (TOC) Total phosphorus Zinc	Biological oxygen demand (BO_5D) Boron Chemical oxygen demand (COD) Conductivity at 20ºC Iron Kjeldahl nitrogen Lead pH Suspended solids Total nitrogen

Metals will be determined as "total metals"

Wastewater: Microbiology

[ref. 990014]

Round I	Round II	Round III
Week 6 ***6th February 2023***	*Week 18* ***2th May 2023***	*Week 43* ***23th October 2023***
Clostridium perfringens Enterococci *Escherichia coli* Faecal coliforms *Salmonella* spp. Total coliforms	*Clostridium perfringens* Enterococci *Escherichia coli* Faecal coliforms *Salmonella* spp. Total coliforms	*Clostridium perfringens* Enterococci *Escherichia coli* Faecal coliforms *Salmonella* spp. Total coliforms

Reclaimed Water

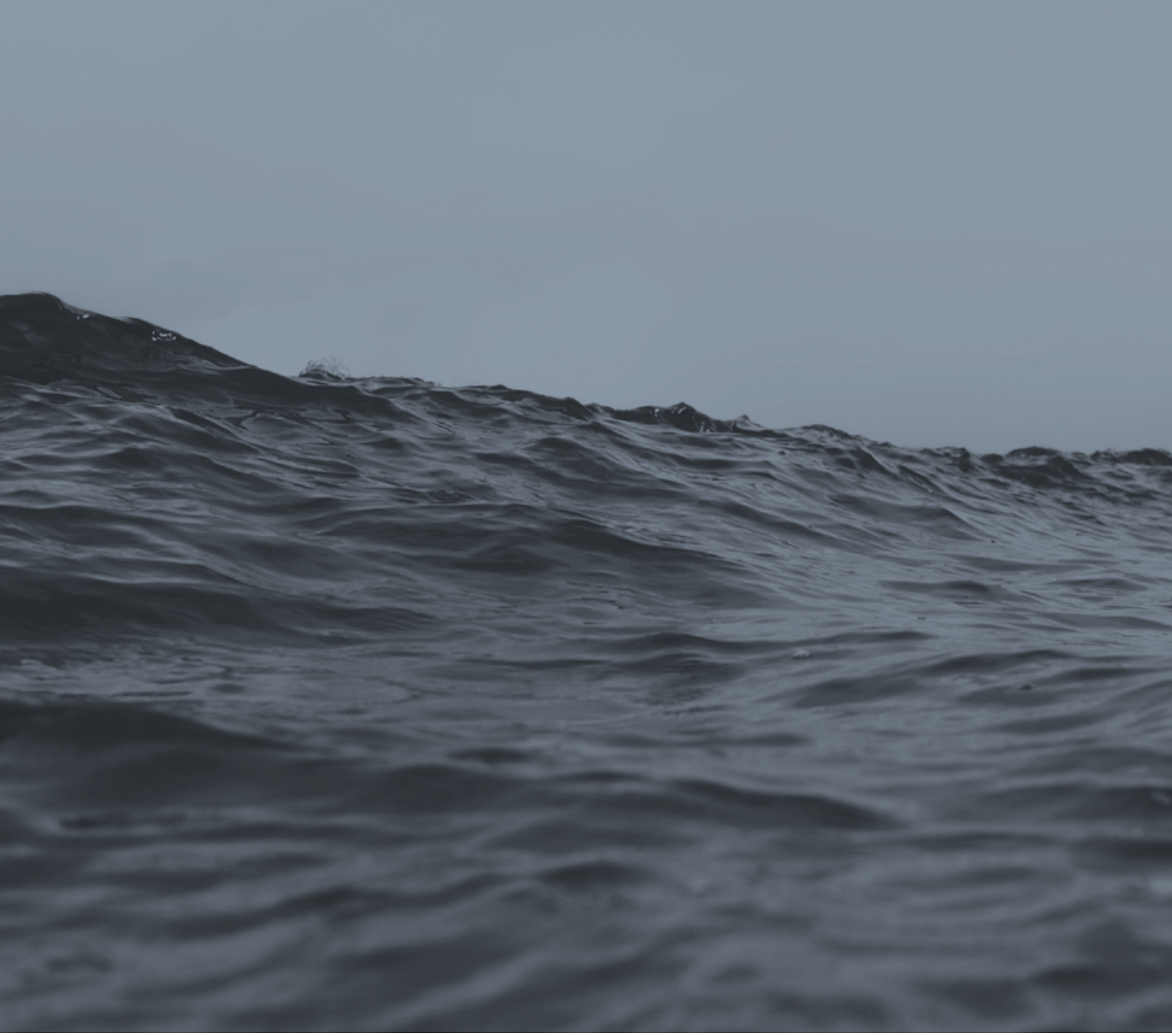
[ref. 990005]

Round I	Round II
Week 12 ***20th March 2023***	*Week 39* ***25th September 2023***
Boron *Escherichia coli* Intestinal nematodes *Legionella pneumophila* *Legionella* spp. Suspended solids Total phosphorus Turbidity*	Cadmium *Escherichia coli* Intestinal nematodes *Legionella pneumophila* *Legionella* spp. Nitrates SAR* (Sodium Adsorption Ratio) Total nitrogen

** Parameter not included in our accreditation by ENAC*
Metals will be determined as "total metals"

Sea Water

Sea Water | *page 25*



Sea Water

Sea water is marine water, with a wide variety of minerals that confers a high saline percentage (between 35 and 38‰).

The sea water control is especially important in bathing areas. The Directive 2006/7/EC, February 15th, 2006 concerning the quality management of bathing water, collects the scientific and technical specifications and enables a more consistent legal framework both with the needs and the advances and the progress in recent years regarding bathing waters. At the national level, RD 1341/2007 regulates this type of water"

There are also various international networks focused on the Control and Quality Monitoring of Coastal Water whose main goal is to have an intervention tool, in order to provide information on the evolution of water and aquatic ecosystems quality by using of biological, hydromorphological and physicalchemical indicators.

Sea Water

[ref. 990000]

Round I	Round II
Week 23 ***5th June 2023***	*Week 36* ***4th September 2023***
Ammonium Arsenic Cadmium Enterococci *Escherichia coli* Nickel Nitrates pH Total coliforms Turbidity	Antimony Enterococci *Escherichia coli* Kjeldahl nitrogen Lead Mercury Orthophosphates Salinity Total coliforms

Metals will be determined as "total metals"

Atmosferic Pollution

Stack Emissions: Physical-chemical | *page 28*

Atmosferic Pollution

Industrial combustion and other kind of processes are susceptible to produce various contaminants which have been demonstrated or can be harmful to health and the environment. Control of these emissions permits to manage its environmental impact, demonstrating compliance with established legislative limits and avoiding penalties and adverse publicity.

European legislation (Directive 96/61/EC and 2008/1/EC version) states that emissions of static points as chimneys must be controlled so as to prevent or reduce such emissions and analytical controls are intended to control these emissions.

The material used is similar to that usually found in laboratories for such tests and consists of two types of supports, filters and impinger solutions. In the former, all the possible contaminations related to particles are studied and in the impinger solutions those pollutants in gaseous state are collected. The preparation and analysis of the established parameters are based on international regulations that allow rounds to be offered according to the needs of the laboratories (UNE-EN 12341: 2015, UNE-EN 13284-1: 2018 and UNE-EN 14902: 2006).

Stack Emissions: Physical-chemical

[ref. 990008]

Round I	Round II	Round III
Week 10 ***6th March 2023***	*Week 19* ***8th May 2023***	*Week 39* ***25th September 2023***
Filter: Arsenic Cobalt Manganese Nickel Vanadium **Immission filters:** New Arsenic Cadmium Lead Nickel **Impinger solution:** Antimony Arsenic Cadmium Copper Hydrofluoric acid (HF)	**Filter:** Antimony Cadmium Chromium Mercury Tin **Impinger solution:** Chromium Hydrochloric acid (HCl) Lead Manganese Vanadium	**Filter:** Copper Lead Selenium Thallium Zinc **Immission filters:** New Arsenic Cadmium Lead Nickel **Impinger solution:** Cobalt Nickel Sulphur dioxide (SO_2) Thallium Zinc

Solids

Solids

Sludges and soils, which count with completely different physical-chemical characteristics, are included in this group of schemes.

A sludge, also called mud, is defined as a semisolid residue which is produced, decanted or settled during a water treatment. They are generated in the septic tank of houses, shopping malls, offices or industries, or produced in a water treatment plant, as well as control units of atmospheric emissions.

A soil is the uppermost layer of Earth´s crust, which results of the decomposition of rocks by sudden temperature changes and by the action of the water, wind and living beings. The chemical composition and physical structure of the soil at a certain location are determined by the type of geological material that originates, by the vegetal cover, by the time that weathering has acted, by topography and by artificial changes resulting from human activities.

The study of physical-chemical and microbiological parameters in this matrix allows evaluating its quality, conservation and proper management.

Soils: Physical-chemical

[ref. 990017]

Round I
Week 43 ***23th October 2023***
Arsenic Cadmium Calcium Chromium Conductivity at 20ºC Copper Iron Lead Magnesium Manganese Mercury Nickel pH Potassium Sodium Total phosphorus Zinc

Metals will be determined as "total metals"

Sludges: Physical-chemical

[ref. 990013]

Round I	Round II
Week 13 ***27th March 2023***	*Week 36* ***4th September 2023***
Arsenic Cadmium Chromium Copper Iron Kjeldahl nitrogen Lead Manganese Mercury Nickel pH Zinc	Aluminium Cadmium Chromium Conductivity at 20ºC Copper Lead Mercury Nickel Total organic matter Total phosphorus Zinc

Metals will be determined as "total metals"

Sludges: Microbiology

[ref. 990027]

Round I
Week 10 ***6th March 2023***
Clostridium perfringens Enterococci *Escherichia coli* Faecal coliforms **New** *Salmonella spp.* Total coliforms

Round not included in our accreditation by ENAC

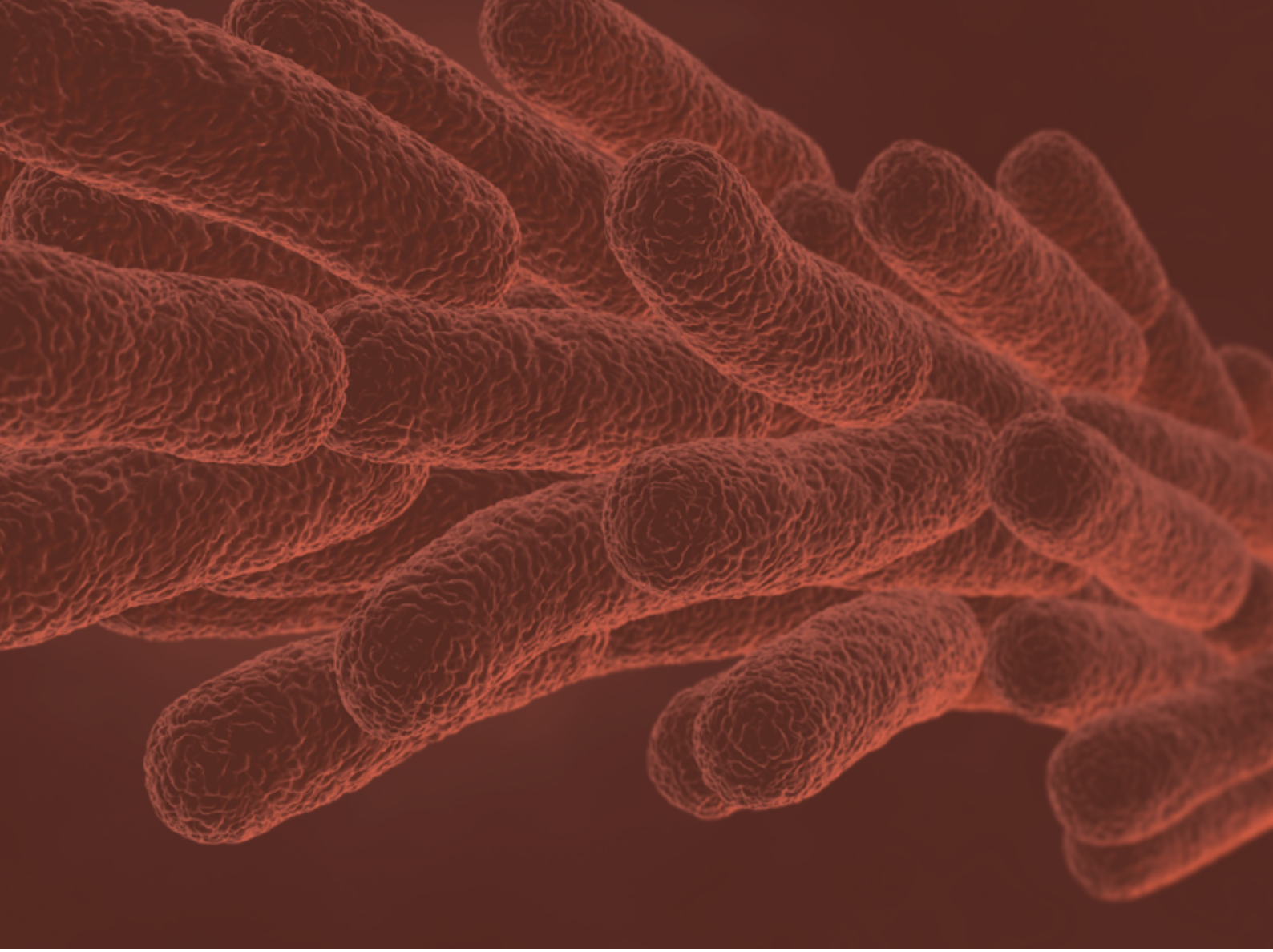
Solids in Wastewater

[ref. 990016]

Round I	Round II
Week 8 ***20th February 2023***	*Week 20* ***15th May 2023***
Dissolved solids at 105ºC* Fixed suspended solids* Fixed total solids* Settleable solids* Suspended solids Total solids at 105ºC* Volatile suspended solids* Volatile total solids*	Dissolved solids at 105ºC* Fixed suspended solids* Fixed total solids* Settleable solids* Suspended solids Total solids at 105ºC* Volatile suspended solids* Volatile total solids*

** Parameter not included in our accreditation by ENAC*

Legionella



Legionella

Of all the environmental pathogens, Legionella and particularly *Legionella pneumophila* species is one of the most studied organisms due to its impact in large communities, and therefore its importance for public health and the enormous social and economic impact.

In all current laws and regulations on legionellosis prevention, *Legionella* testing is contemplated as one of the most important preventive methods, establishing culture isolation based on the ISO 11731 standard as the reference method. ielab's *Legionella*: Culture scheme simulates natural samples to be tested by the method implemented in the laboratory, to assess the analytical performance of the laboratory and the recovery rate of the used method.

However, culture isolation presents different drawbacks such as time-to-results that can be up to 10-12 days. Due to the need in many cases for rapid results, alternative methods such as those based on nucleic acid amplification (qPCR), have been described as valid and very useful tools for the detection of *Legionella*.

Royal Decree 487/2022 becomes the new legislative cornerstone in relation to the prevention and control of this bacterium, gathering the main technical advances and covering aspects not included in the legislation until now.

In the *Legionella*: PCR scheme, samples contain inactivated cells that allow the assessment of both the efficiency and performance in the analytical phases of concentration, DNA extraction / purification and amplification.

Legionella: Culture

[ref. 990020]

Round I	Round II	Round III
Week 11 ***13th March 2023***	*Week 19* ***8th May 2023***	*Week 40* ***2th October 2023***
Sample A: *Legionella pneumophila* *Legionella* spp. **Sample B:** *Legionella pneumophila* *Legionella* spp.	**Sample A:** *Legionella pneumophila* *Legionella* spp. **Sample B:** Culturable microorganisms at 22ºC Culturable microorganisms at 36ºC *Legionella pneumophila* *Legionella* spp.	**Sample A:** *Legionella pneumophila* *Legionella* spp. **Sample B:** *Legionella pneumophila* *Legionella* spp.

Sample B will include natural matrix

Legionella: PCR

[ref. 990012]

Round I
Week 11 ***13th March 2023***
Legionella pneumophila *Legionella* spp. **3 samples:** Evaluation: concentration, extraction/ purification and amplification of DNA

Bacteriophages

Bacteriophages | *page 38*

Bacteriophages

Historically, microbiological control has been mainly done through bacterial indicators, but currently viral indicators are trending in quality control of water, biosolids and food. The new European Directive (EU) 2020/2184 December 16th, 2020 on the quality of water intended for human consumption includes the somatic coliphage parameter as an indicator to verify the effectiveness of treatment processes against microbiological risks.

Bacteriophages as viral indicators provide additional advantages to bacterial indicators, since they are present in the environment in a similar amount to bacterial indicators, usually persist longer and provide more information on viral pathogens which are not properly represented by studying only bacterial indicators.

Somatic coliphages are bacteriophages of enteric origin that can infect Escherichia coli through cell surface receptors.

F-specific coliphages, also named sexual coliphages or male-specific bacteriophages, infect bacteria through the sex pili.

The presence of both somatic and/or F-specific coliphages in water samples usually indicates pollution by human or animal faeces, or by sewage containing these excreta. Therefore, these coliphages provide a simple and relatively rapid tool for the detection of faecal pollution, and their resistance in water and food tends to resemble that of human enteric virus more closely than faecal bacteria, commonly used as water or food quality indicators.

Both somatic and F-specific coliphages are included in water, wastewater, biosolids and food guidelines and regulations complementing the use of bacterial indicators such as *E. coli* and Enterococci.

Bacteriophages

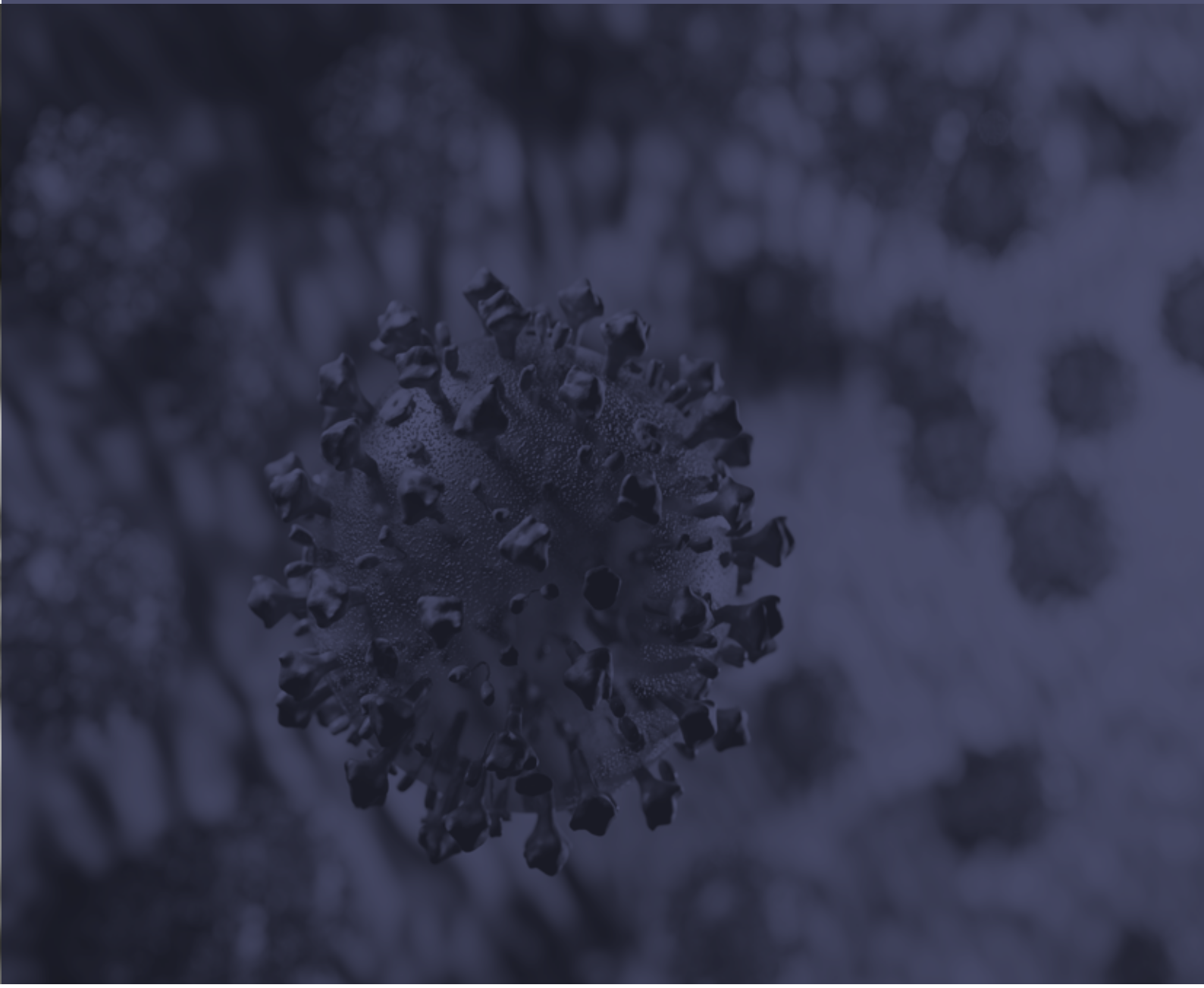
[ref. 992512]

Round I	Round II
Week 13 ***27th March 2023***	*Week 38* ***18th September 2023***
F-specific bacteriophages Somatic bacteriophages 2 Samples Matrix: Driking Water	F-specific bacteriophages Somatic bacteriophages 2 Samples Matrix: Wastewater

Rounds not included in our accreditation by ENAC

SARS-CoV-2

SARS-CoV-2 | *page 41*



SARS-CoV-2

With the global pandemic of COVID-19, the performance of detection tests is being prioritized not only in patients but also in the environment that surrounds us.

The European Commission, in its Recommendation (EU) 2021/472, urges member states to establish a systematic surveillance for SARS-CoV-2 virus and its variants in EU wastewater as a complementary tool for data collection and management of the pandemic. It also establishes that to assure that sampling and analysis methods are comparable and reliable, Member States must ensure that laboratories participate in appropriate proficiency tests organized by accredited providers.

ielab organized in October 2020 a Proficiency Testing Scheme for the detection of SARS-CoV-2 using RT-qPCR, and in May 2021 it became the first national accredited provider of proficiency testing schemes for the detection and quantification of SARS-CoV-2 in wastewater.

As for the samples to be tested, they may be of synthetic or natural origin and will contain virus genetic material of SARSCoV-2, which will allow to evaluate the virus detection process after the concentration, extraction and amplification phases. Rounds I and III will include a natural wastewater matrix to evaluate all phases of the process: Concentration, extraction and amplification. The results can be reported both qualitatively (Detected / Not Detected) and quantitatively. The fields of application are: clinical/sanitary, environmental and surfaces.

SARS-CoV-2

[ref. 992764]

Round I	Round II
Week 9 ***27th February 2023***	*Week 42* ***16th October 2023***
Sample A: Evaluation: Extraction and amplification **Sample B:** Evaluation: Concentration, extraction and amplification	**Sample A:** Evaluation: Extraction and amplification **Sample B:** Evaluation: Concentration, extraction and amplification

New

Cosmetics

Cosmetics: Microbiology | *page 44*

Cosmetics

The analyses on cosmetics are part of quality control and aim to verify and conform materials or products against the specifications established by the current legislation. Microbiological analysis helps to keep under control the proliferation of microorganisms that can cause contamination, poisoning and disease.

ISO 22716 is aimed at the cosmetic industry, and provides guidelines for the production, control, storage and dispatch of cosmetic products and ingredients.

The participation of cosmetic companies in our scheme will provide them a valuable tool for their laboratory. It will allow them to ensure the quality of the results they issue through independent assessment, and will help them to better comply with their ISO 22716 quality assurance system (GMPs). In addition, their participation will facilitate them performance aspects and they will be able to demonstrate their technical competence versus clients and public bodies.

Cosmetics: Microbiology **New**

[ref. 992826]

Round I	Round II
Week 17 ***24th April 2023***	*Week 44* ***30th October 2023***
Quantitative parameters: Culturable microorganisms at 22ºC Culturable microorganisms at 35ºC Molds and yeasts **Qualitative parameters:** *Burkholderia cepacea* complex (Bcc) *Candida albicans* Coagulase positive staphylococci *Escherichia coli* Other coliforms different to *E. coli* *Pseudomonas aeruginosa*	**Quantitative parameters:** Culturable microorganisms at 22ºC Culturable microorganisms at 35ºC Molds and yeasts **Qualitative parameters:** *Burkholderia cepacea* complex (Bcc) *Candida albicans* Coagulase positive staphylococci *Escherichia coli* Other coliforms different to *E. coli* *Pseudomonas aeruginosa*

Rounds not included in our accreditation by ENAC
Samples will include real matrices

in situ Analysis and Sampling

in situ Analysis and Sampling

These are face-to-face schemes in which the participants attend to the location established by the organization to carry out several measurements *in situ*. Each participant can use the method and equipment considered as appropriate, with no limitation by the side of the Organizer.

In the in situ Analysis and Sampling: Physical-chemical scheme, *in situ* measurements are made for the parameters: conductivity, pH, dissolved oxygen, temperature and flow in three different matrices (wastewater, continental water and sea water). Yearly, 2 rounds are offered, one located in Alicante and another in Madrid.

Only for the round located in Alicante, in addition to the *in situ* analyses, a Sampling testing of physical-chemical parameters is carried out in the continental water and wastewater matrices. All samples are collected by the Organizer and subsequently analysed by a single reference laboratory.

The technical and statistical analysis is carried out according to the criteria established by the IUPAC and the "Selection, Use and Interpretation of Proficiency Testing (PT) Schemes by Laboratories (2021)" guide, so as to ensure the homogeneity and stability of the sample during the test.

ielab also makes the Indoor Air Quality (IAQ) scheme available to laboratories as an external tool for quality a control of their measurements, and as a synonymous of guarantee of their correct performance and technical competence. The face-to-face format of this PTS eliminates any risk of contamination of the client's own facilities. This scheme includes *in situ* physical-chemical measurements and sampling for microbiological parameters of air and surfaces. In this case, each laboratory will carry out the analysis of its samples and will send the results to the Organization.

in situ Analysis and Sampling: Physical-chemical

[ref. 990023 | 990025]

Alicante	Madrid
Week 20 ***18th May 2023***	*Week 42* ***19th October 2023***
Continental water: Conductivity at 20ºC Dissolved oxigen pH Temperature **Wastewater:** Conductivity at 20ºC Discharge* Dissolved oxigen pH Temperature **Sea water:** Conductivity at 20ºC Dissolved oxigen pH Temperature **Sampling: Physical-chemical***	**Continental water:** Conductivity at 20ºC Dissolved oxigen pH Temperature **Wastewater:** Conductivity at 20ºC Discharge* Dissolved oxigen pH Temperature

** Parameters and activities not included in our accreditation by ENAC*

Indoor Air Quality **New**

[ref. 992827]

Murcia	Barcelona
Week 24 ***14th June 2023***	*Week 45* ***8th November 2023***
Physical-chemicals: 0.5 µm particle count 5 µm particle count CO emission CO_2 emission Suspended particles by gravimetry Thermo-hygrometric conditions **Air:** Molds and yeasts Total microorganisms at 22ºC Total microorganisms at 36ºC **Surfaces:** Molds and yeasts Total microorganisms at 22ºC Total microorganisms at 36ºC	**Physical-chemicals:** 0.5 µm particle count 5 µm particle count CO emission CO_2 emission Suspended particles by gravimetry Thermo-hygrometric conditions **Air:** Molds and yeasts Total microorganisms at 22ºC Total microorganisms at 36ºC **Surfaces:** Molds and yeasts Total microorganisms at 22ºC Total microorganisms at 36ºC

Rounds not included in our accreditation by ENAC

ielab Proficiency Testing Schemes: 2023 schedule

General conditions about the participation in ielab Proficiency Testing Schemes

Registration

The easiest and safest way to register in our Proficiency Testing Schemes (PTS) is through **ielab**'s website (www.ielab.es). By this way the confidentiality and agility on the information and data transmission is assured. Alternatively, you can also register by contacting us by email (comercial@ielab.es).

The current prices can be consulted in the specific rates document and also when you make your registration through the website. The registration fee includes sample preparation, access to the website for data submission and for downloading results reports and any other document related to the rounds such as the certificate of participation. Any additional tax or fee will be added before the confirmation of the purchase order, whenever necessary.

The participating laboratory may request the cancellation of its participation in a round of the PTS, as long as it is properly notified to the organization with enough time prior to its completion.

By another hand, in case that the calendar, planning or any of the previously agreed terms cannot be fulfilled, the participants will be informed in writing with the adopted solutions. If the number of registrations for a PTS round does not reach the minimum required to carry it out, the organization may cancel or delay this round, refunding or replacing the registration to the participants

Frequency of participation

The frequency of participation in the PTS depends on several specific factors related to the characteristics of each laboratory, as well as other aspects of quality control. The number of samples tested, and the risk associated with the tests are very important issues to be considered. Therefore, each laboratory should establish its own frequency of participation.

Accreditation bodies often offer guidelines about frequency of participation, such as in the documents "NT-03-Política de ENAC sobre intercomparaciones" and the guide "Guía sobre la participación en programas de Intercomparaciones G-ENAC-14" or in EURACHEM Guide "Selection, use and interpretation of Proficiency Testing Schemes".

Confidentiality

To guarantee confidentiality, the participation codes of each laboratory are automatically assigned by the software at the time of registration.

Each participant has a 4-digit code that can be changed and that allows them to identify their results in the round report. In this way, their identity is protected against the rest of the participants and from the organization itself. The code can be changed at any time by the customer. In the results report only this code is mentioned neither including the name or other information of the participant, nor the data included in the observations field of the results bulletin.

Payment

PTS payment can be made via:

BANK TRANSFER:

Bank: Banco Bilbao Vizcaya Argentaria, S.A. (BBVA)

Address:Plaza Antoni Maura, 6, 2ª PLANTA. Barcelona. Spain.

Bank Account: 01823994050201548997

Swift: BBVAESMMXXX

IBAN: ES9101823994050201548997

CREDIT CARD (only website registrations):

For other options, please contact to our email address comercial@ielab.es.

Sample preparation and verification

ielab will prepare natural samples if possible. If any element or microorganism is not present in the natural sample, the appropriate analytes or microorganisms relevant to investigation will be added/spiked, or a synthetic sample will be prepared. This information is detailed in the round instructions and is available to customers upon request.

The corresponding homogeneity and stability studies of the samples will be performed according to IUPAC (International Union of Pure and Applied Chemistry) and to the ISO 13528 standard.

Packaging and shipping of samples

Samples will be sent to participants by express courier according to the previously established calendar, being preferably sent on Monday.

The materials used in the PTS are packaged complying with the legal requirements regarding transport and under conditions that allow preserving their content. In general, most of the samples from **ielab**'s PTS are sent at room temperature. If any sample must be kept refrigerated after reception, it will be detailed in the round instructions document for each round.

Express courier systems are used, and the samples are accompanied by all transport documentation required by international regulations. However, in some countries, we recommend participants to obtain information in advance about the import documents or taxes that may be needed. It is recommended that the final participant be informed of possible import procedures and notify **ielab** any additional instruction or document required in their country regarding these procedures.

ielab declines the responsibility of the shipment status if it has been retained at the customs office of the destination country.

Handling and storage of samples

Prior to sending the samples, **ielab** provides detailed instructions to the participants that clearly specify how each sample should be preserved and/or handled. **ielab** has designed and planned its rounds so that the handling of the samples is a quick and easy process. Sometimes, it is also included a workflow diagram in the instructions to make handling easier. This information is also available on our website.

The samples are preserved to maintain their optimal analytical properties under the usual shipping conditions and transport times. Stability tests are carried out simulating shipping conditions and during the established test period. In addition, there is a transport control in the samples of the microbiology rounds consisting on sending to one of the participants a duplicate of the samples to be tested, which are returned to the organization for verification.

For the microbiological rounds, the samples can begin to be analyzed even up to a week after being sent, although it is advisable to do it as soon as they are received.

For physical-chemical parameters, the recommended analysis period is extended until the results submission deadline. Nevertheless, if any parameter must be analyzed before this period, all the complementary information necessary to perform the analysis is specified in the instructions.

Volumes and analytical methodology

The volume of sample sent by **ielab** is considered enough to analyze any parameter in triplicate according to the most commonly used methodologies.

It may happen that your laboratory requires more sample volume. In this case, **ielab** can provide you with an "extra sample" under request with an additional charge. Contact by e-mail to comercial@ielab.es to know this rate.

As a PTS provider, **ielab** does neither requires nor recommends any method of analysis. One of the objectives of proficiency testing is to determine the effectiveness of a laboratory in terms of tests or measurements that are usually performed, so that participants can analyze PTS samples using the method they wish. It is important that the participants report the method used and the technical specifications requested, since we often also assess the results based on the methods used.

Therefore, the participating laboratories will be able to analyse the samples according to their usual method, and for the parameters that interest them.

Deadline and how to submit the results

Deadline of each round is detailed in the instructions provided and all details are also available on our website. Usually, the deadline to submit results is 3 weeks after samples are dispatched. Please consider that after the established deadline, results cannot be recorded in the website anymore.

To report results, you must access the private client area of our website www.ielab.es with your usual username and password, and select the "Open Proficiency Tests/ Results submission" section from the menu. The results bulletin will open automatically. In case you are participating in several rounds in progress, a drop-down will appear where you must choose the desired round. After filling the bulletin, you must press the "Save" button and check that you receive a confirmation email at the email address that appears in the database.

Once the results are saved, they will be available if you re-enter with your username and password. You can add or modify them as many times as you wish. If you make any changes, you should "save" again, and you will receive a confirmation email again.

The results bulletin will be available for editing until the established deadline of the round. Once this period is expired, the bulletin of results will be blocked, and no modifications can be made. Alternatively, there are other options to submit results and you can acquire this service when you register by selecting ("Paper Management Service"). By submitting the results, the participant authorizes **ielab** to use those results for the commercialization of reference materials.

Expression of results

The results reported should be expressed in the units indicated in the PT Schemes' round instructions for each parameter and following their guidelines. Decimal numbers must be typed according to the settings of each participant's computer, without using any symbol to separate thousands positions. In some cases, the instructions of each round indicate the maximum number of decimal places that should be used to express the results.

Each participant can analyze the parameters he/she considers. For any analysed parameter it is necessary to submit the number of replicates detailed in the round instructions, as well as any other requested information. Please follow carefully the detailed guidelines included in the instructions of each round.

Statistical treatment

The technical and statistical study is carried out according to the IUPAC criteria and to the ISO 13528 Standard. The results are therefore subjected to a broad and robust statistical study to obtain the assigned value.

For each parameter, its consensus value, standard deviation and uncertainty is calculated (without outliers or statistically failed results). In addition, for added analytes, the known value and the uncertainty may be indicated in the report.

Each laboratory will be evaluated by means of the Z-score criteria, using the values of the applicable legislation as criteria for calculating the "Standard Deviation for Proficiency Assessment (SDPA)". If it does not exist, it will be calculated based on international standards, or using the Horwitz function modified by Thompson.

For microbiology, the SDPA will be obtained based on historical rounds results. The SDPA value can also be fixed by **ielab**.

The SDPA calculation criteria for each parameter is available to customers who request it and on our website.

Reports

The reports produced by **ielab** include detailed information on all aspects of the round and its results.

For each round, a detailed report is prepared that includes information on the design of the round, the preparation of the samples, homogeneity and stability, tables with the results of all the participants, the methods used (identified with the method number), the complete statistical study and graphs of distribution of results, and with the results of the evaluation of the participants, among others. Additionally, a personalized report is prepared for the comparison of results. At the request of the clients, additional reports can be prepared under agreed specifications, and will have an additional charge.

The reports of results are sent to the participants by email in pdf file and within 15 working days after the closing date of the round. There is the option to request reports printed. Check the current charges for this way of report shipment ("Paper Management Service").

If the number of results for a parameter does not reach the minimum required (10 available results to perform the statistical study), this parameter will be identified as "out of scope of ENAC Accreditation" in the results report.

In case of doubt regarding any result or your evaluation in the round report, you can contact **ielab** by phone or email and we will assist you in a personalized way, studying your query to give you the answer that best suits the circumstances.

ielab accredited provider

ielab is a company committed to quality and efficiency. The ISO 9001 certification of all our activities and the accreditation according to the ISO/IEC 17043 standard as a provider of PTS guarantee this commitment.

The accreditation document, as well as its scope (No. 2/ PPI007), can be consulted on the **ielab** website (www.ielab.es) and on the ENAC website (www.enac.es).

Subcontracted activities

The activities related to the analytical processes for homogeneity and stability verification of the samples are subcontracted with a laboratory accredited under ISO 17025. Therefore, the requirements of ISO 17043 for PTS providers are fulfilled. The preparation of nematode samples is also subcontracted to a Public Entity with recognized experience in this field.

Claims and complaints

ielab counts with a process addressed to facilitate the appeal of the participants against the assessment of their performance in a proficiency test, which is available to the participants. In case that a laboratory does not agree with the evaluation of its results, or with any other aspect of the services provided, it may request clarification or make a claim through the usual channels of contacting with **ielab**, preferably by email.

Likewise, **ielab** has a complaint management procedure in accordance with our quality system and which is available to our clients upon request.

Confabulation, connivence and falsification of results

ielab pays special attention to avoid situations of collusion between participants and treats confidentially both the identity of the participants and their results. **ielab** neither publishes the names of the laboratories nor transfers any type of information from one participant to another, in order to minimize opportunities for connivance and falsification of results.

In the case that **ielab** had well-founded suspicions and evidence about the connivance or falsification of results, it will eliminate the results of the participants involved in the statistical study and these results will not be evaluated with a Z-score. **ielab** considers that the participants themselves are responsible for avoiding this type of situations of collusion, connivance and / or falsification of results.

Conditions of the promotions

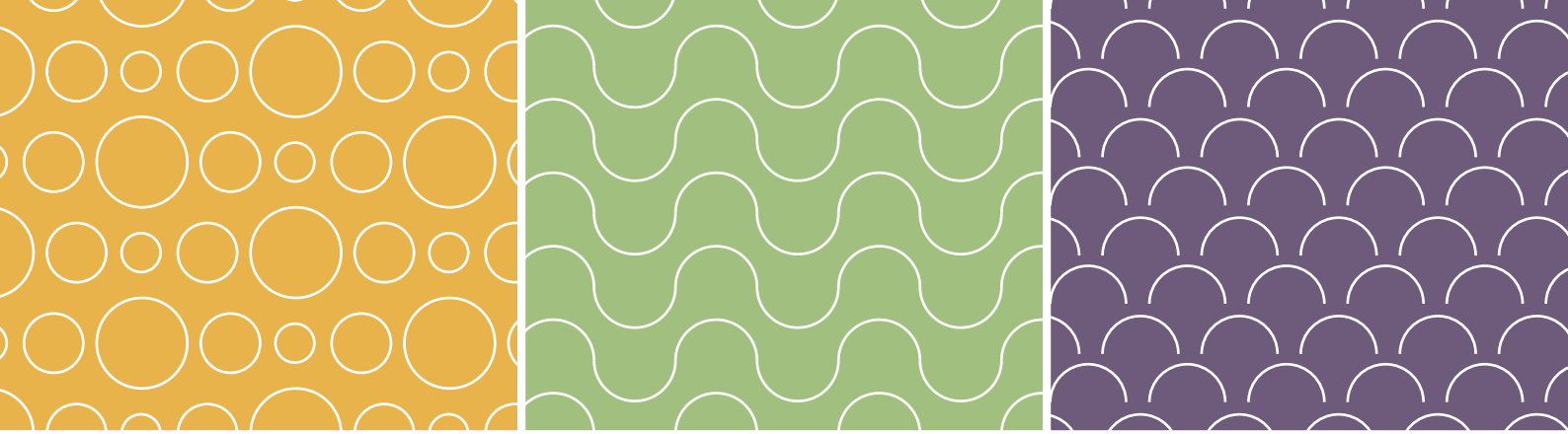
5% early-bird discount
5% discount on the amount of all the rounds included in the order placed before December 25th, 2022. It is required to have participated in the 2021 and 2022 ielab rounds. Discount cumulative to other applicable promotions
5% discount for rounds increase
5% discount on the amount of all the rounds included in the order that exceeds the number of rounds contracted in 2022. Discount cumulative to other applicable promotions
10% discount for rounds increase belonging to the same matrix
10% discount for registration in rounds of the same matrix, according to the combinations described below. Discount cumulative to other applicable promotions

If you register to:	And also to:
Driking Water: Microbiology	Driking Water: Physical-chemical A y/o Driking Water: Physical-chemical B y/o Driking Water: Physical-chemical C y/o Driking Water: Physical-chemical D
Wastewater: Physical-chemical	Wastewater: Microbiology
Sludges: Physical-chemical	Sludges: Microbiology
Legionella: Culture	*Legionella*: PCR

15% discount 2 rounds same scheme
15% discount on the amount of the 2 rounds of the same scheme. This discount will be applied directly to the registration when selecting 2 rounds of the same scheme. Discount cumulative to other applicable promotions, except for the 25% discount promotion for 3 rounds of the same scheme
25% discount 3 rounds same scheme
25% discount on the amount of the 3 rounds of the same scheme. This discount will be applied directly to the registration when selecting 3 rounds of the same scheme. Discount cumulative to other applicable promotions, except for the 15% discount promotion for 2 rounds of the same scheme

Parameters Index

Parameters list in alphabetical order and the page/s where they can be found:



ielab

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