



# **MOLECULAR DIAGNOSTIC KITS**

## **CATALOGUE**



**Version 1.0**  
**November 2020**

## MOLECULAR DIAGNOSTIC KITS

Molecular detection/quantification techniques have revolutionized diagnosis over the past years. Polymerase Chain Reaction (PCR), and more specifically Real-Time PCR (qRT-PCR) has been turned into one of the most powerful *in vitro* diagnostic tool.

ielab presents, within the framework of its line of products for microbiological diagnostics, a new range of molecular diagnostic kits, which have been specially designed to improve microbiological diagnostics.

### Properties of the Kits

- All the necessary reagents are included in the kit and are ready-to-use.
- Freeze-dried reagents.
- Transport at room temperature.
- Easy-to-use. It minimizes the number of manipulations reducing time and possible errors.
- Exceptional sensitivity, specificity and reproducibility.
- Maximum reliability. Use of positive internal controls.
- Capacity to be automated.
- Great versatility and flexibility in sample analysis. From 1 to 96 samples per assay.
- Flexibility. Adaptable to any commercial thermocycler.
- Quick and easy interpretation of results.



### Advantages of the Kits

- **Simplicity:** Only a few pipette transfers are needed.
- **Rapidity:** Results in less than 3 hours.
- **Quality:** Positive controls are used both internal and external.
- **Reliability:** The extraction kits are adapted to the existing different matrix types.
- **Delivery:** Transport at room temperature.
- **Shelf-life:** 24 months

All these kits are characterized by their being extremely easy to use and can be employed by any analyst. Furthermore, within the kit it is supplied the link where the user can download a detailed manual for the use of the kit.

ielab kits

For orders or further information contact your local ielab dealer or

[comercial@ielab.es](mailto:comercial@ielab.es) – Tel: +34 966 10 55 01.

## Kits for sample preparation

Kits for the complete preparation of water samples, in order to get them ready for further analysis by PCR techniques.

### Kit for the concentration of water samples

Concentration of the microorganisms present in water samples prepared by filtration and concentration cartridges, for later testing for the presence of *Legionella* or other bacteria by PCR techniques.

Material description	Cat. No.
Kit for concentration of water samples (35 test), includes membranes and cartridges.	990075

### Kit for the preparation of samples of "clean" water

System for the extraction and purification of DNA from water samples in which it is assumed that the microbiota and organic material contents are low (for example, in potable waters). This kit allows the production of DNA with a quality and quantity enough for the analysis of the presence of *Legionella* or other bacteria by PCR techniques.

Material description	Cat. No.
Kit for preparation of samples of clean water (70 tests)	990074
Filtration membranes (100 units)	990108

### Kit for the preparation of samples of "dirty" water

System for the extraction and purification of DNA from "dirty" water samples (for example, water from refrigeration towers). This kit allows the production of DNA with a quality and quantity sufficient for the analysis of the presence of *Legionella* or other bacteria by PCR techniques. It is particularly useful for the elimination of possible inhibitors of the PCR reactions.

Material description	Cat. No.
Kit for preparation of samples of dirty water (35 tests)	990076
Filtration membranes (100 units)	990108

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## Kits for detection and/or quantification

Kits for the quantitative or qualitative detection of microorganisms by PCR. They include the corresponding positive and negative controls.

Their design incorporates specific positive internal controls which allow the evaluation of the appearance of false negatives due to the presence of PCR inhibitors in the sample.

### Workflow



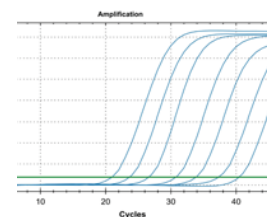
**Step 1**  
Add rehydration buffer



**Step 2**  
Add samples and control



**Step 3**  
Amplification protocol



**Step 4**  
Results interpretation

## Kit for the real time detection and quantification of *Legionella* by PCR

Allows the detection and quantification of *Legionella pneumophila* and *Legionella* spp. in DNA extracted from water samples from diverse sources.

Each kit contains all the necessary material to conduct 70 tests.

Material description (*)	Cat. No.
Kit for detection and quantification of <i>Legionella</i> spp. High profile tubes	992402
Kit for detection and quantification of <i>Legionella</i> spp. Low profile tubes	992403
Kit for detection and quantification of <i>Legionella pneumophila</i> . High profile tubes	992400
Kit for detection and quantification of <i>Legionella pneumophila</i> . Low profile tubes	992401

(\*) You can check if your thermocycler is equipped with a high or low profile block in the table included at the end of this catalogue.



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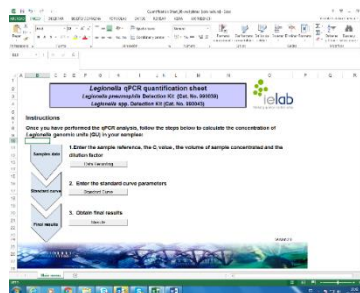
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## OTHER COMPLEMENTARY MATERIAL

### Quantification and Validation software

ielab offers two spreadsheets as tools that can help user in the tasks of quantification and validation of results, which are high time-consuming activities in the laboratory. The Quantification spreadsheet allows a quick way of calculating the number of Genomic Units in the samples analyzed. The validation spreadsheet can be used for the characterization and the secondary validation of these two methods based on the use of the ielab *Legionella* spp qPCR kit (Cat. No. 992402; Cat. No. 992403) and *Legionella pneumophila* qPCR kit (Cat. No. 992400; Cat. No. 992401) and following the ISO/TS 12869.



Software	Cat. No.
qPCR Quantification	992405
qPCR Validation	992404

### BAControl-DNA

Quantitative material presented in vials with a freeze-dried format, whose DNA quantity expressed in µg/vial is certified.

Designed for validation and quality control of the PCR amplification phase.

It has a shelf life of 9 months since the release date, and it is supplied in independent vials accompanied by another vial of sterile water (PCR grade). Apart from the available species, we offer the possibility of preparing these materials for other species of microorganisms.

The microorganisms currently available are the followings:



Species (Traceability)	Other Culture Collections Numbers	Cat. No.
<i>Legionella pneumophila</i> (CECT 7109 T)	WDCM 00107; ATCC 33152; Philadelphia 1; CCUG 9568; DSM 7513; JCM 7571; NCTC 11192	990060
<i>Escherichia coli</i> (CECT 434)	WDCM 00013; ATCC 25922; CCM 3954; CCRC 14902; CCTM La 2184; CCUG 7736; CCUG 17620; CCUG 21456; CIP 76.24; CNCTC Ec 327/73; DSM 1103; FDA Seattle 1946; GISK 240533; HER 1176; IFO 15034; JCM 5491; LMG 8223; NCIMB 12210; PCM 2057	990123

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## BAControl-PCR

Quantitative reference material specially designed for PCR, supplied in a tablet format. Each tablet contains a determined number of deactivated cells, and it is accompanied by a certificate informing about the number of genomic units (g.u.) per tablet.

This allows a control over the whole analytic process, from the initial sample to the final analysis.

This material has a shelf life of 12 months since the release date and it is provided in a dispenser of 5 tablets.

Species (Traceability)	Other Culture Collections Numbers	Concentration (genomic units)	Cat. No.
<i>Legionella pneumophila</i> (CECT 7109 T)	WDCM 00107; ATCC 33152; Philadelphia 1; CCUG 9568; DSM 7513; JCM 7571; NCTC 11192;	low (>4 and <6 log)	990069
		high (>6 and <8 log)	990083

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## COMPATIBILITY OF THE MOST COMMON qPCR EQUIPMENT

Low or high profile tubes can be used in all PCR thermocyclers equipped with low or high/conventional profile block, respectively, according to the systems listed in the table below. If you do not find your thermocycler in this list, please contact us.

LOW PROFILE BLOCK THERMOCYCLERS	
Manufacturer	Model
Agilent Technologies	AriaMx/AriaDx Real-Time PCR System
Applied Biosystems	7500 Fast/7500 Fast Dx Real-Time PCR System <sup>(1) (5)</sup>
	QuantStudio™ 12K Flex 96-well Fast
	QuantStudio™ 6 Flex 96-well Fast
	QuantStudio™ 7 Flex 96-well Fast
	QuantStudio™ 3 Fast Real-Time PCR System <sup>(2)</sup>
	QuantStudio™ 5 Fast/QuantStudio™ 5 Real-Time PCR System
	StepOne Plus™ Real-Time PCR System <sup>(2)</sup>
	StepOne™ Real-Time PCR System <sup>(2)</sup>
	ViiA™ 7 Fast Real-Time PCR System
	Bio-Rad
Mini Opticon™ Real-Time PCR Detection System <sup>(3)</sup>	
Bio Molecular Systems	Mic Real Time PCR Cyclers <sup>(4)</sup>
Cepheid	SmartCycler® <sup>(4)</sup>
Qiagen	Rotor-Gene® Q <sup>(4)</sup>
Roche	LightCycler® 480 Real-Time PCR System <sup>(5)</sup>
	LightCycler® 96 Real-Time PCR System <sup>(5)</sup>
	Cobas z480 Analyzer <sup>(5)</sup>

HIGH PROFILE BLOCK THERMOCYCLERS	
Manufacturer	Model
Abbott	Abbott m2000 RealTime System <sup>(5)</sup>
	7300 Real-Time PCR System <sup>(2) (5)</sup>
	7500 Real-Time PCR System <sup>(5)</sup>
	7900 HT Real-Time PCR System <sup>(2)</sup>
	ABI PRISM 7000 <sup>(3)</sup>
	ABI PRISM 7700 <sup>(2)</sup>
	QuantStudio™ 12K Flex 96-well
	QuantStudio™ 6 Flex 96-well
	QuantStudio™ 7 Flex 96-well
	QuantStudio™ 3 Real-Time PCR System <sup>(2)</sup>
Applied Biosystems	QuantStudio™ 5 Fast/QuantStudio™ 5 Real-Time PCR System
	ViiA™ 7 Real-Time PCR System
Analytik Jena Biometra	TOptical
	qTOWER 2.0
BIONEER	Exicycler™ 96
Bio-Rad	CFX96™ Deep Well / CFX96™ DeepWell IVD Real-Time PCR Detection System
	iCycleriQ™ Real-Time PCR Detection System
	iCycler iQ™5 Real-Time PCR Detection System
	MyiQ™ Real-Time PCR Detection System <sup>(3)</sup>
Bio Molecular Systems	MyiQ™2 Real-Time PCR Detection System <sup>(3)</sup>
	Mic Real Time PCR Cyclers <sup>(4)</sup>
Cepheid	SmartCycler® <sup>(4)</sup>
DNA-Technology	DTprime Real-time Detection Thermal Cyclers
	DTlite Real-Time PCR System
Eppendorf	Mastercycler™ep <i>realplex</i>
Qiagen	Rotor-Gene® Q <sup>(4)</sup>
Stratagene / Agilent Technologies	Mx3000P™ Real Time PCR System
	Mx3005P™ Real Time PCR System
VIASURE	VIASURE 48 Real Time PCR System
	VIASURE 96 Real Time PCR System

(1) Select Ramp Speed "Standard".

(2) No lecture in channel Cy5.

(3) Lecture only in channels FAM and HEX.

(4) The product must be reconstituted following the appropriated procedure (see Test Procedure) and transfer to specific tubes Mic, SmartCycler® or Rotor-Gene® Q.

(5) Needs a special support that fits with these qRT-PCR equipments!

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