

Enumeration of Legionella

Legionella is a bacterial micro-organism responsible for Legionellosis disease.



Determination Method	Membrane
Legionella ISO11731: Concentration Method	PCTE or PES Membrane, 47mm, 0.2um pore size
Legionella ISO11731: Direct Culturing Method	NC or MCE Membrane, 47mm, 0.2um or 0.45um pore size

The ISO 11731 International Standard Water Quality - Enumeration of Legionella specifies the culture and analysis methods for the isolation of Legionella and enumeration in water samples. Test methods include concentration by membrane filtration, dilution or directly plated.

For direct placing on culture media, ISO 11731 recommends the use of nitrocellulose (NC) or mixed cellulose ester (MCE) membranes for culturing media; diameter of 47mm or 50mm with rated pore sizes of 0.2um or 0.45um.

For concentration and elution: ISO 11731 recommends the use of PCTE or PES membrane filters, diameter 47mm to 142 mm with rated pore sizes of 0.2 µm for concentration followed by a washing procedure.

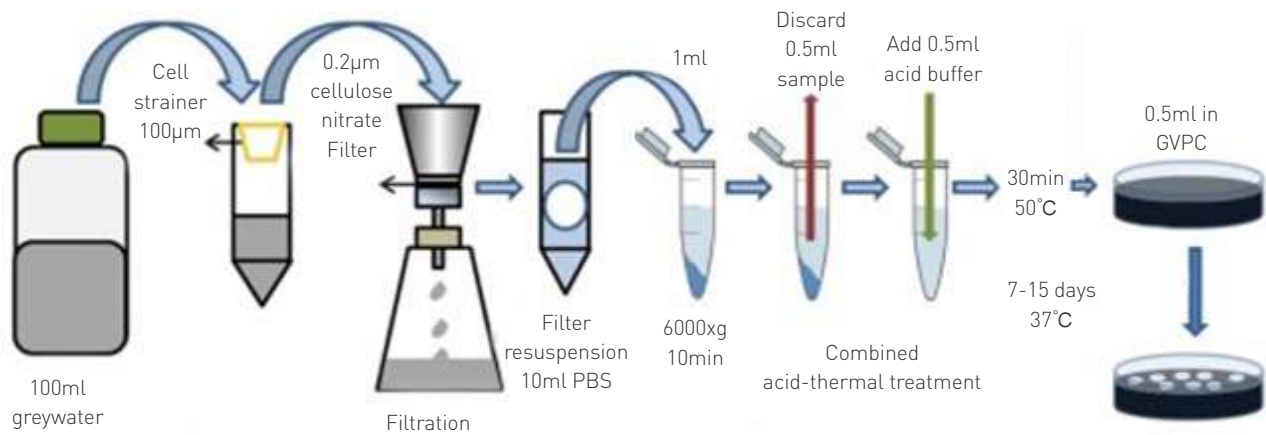
Determination Method	Membrane
Legionella ISO 12869	FLAME FAST All-in-ONE kit

Traditional culture-based detection of bacteria is often laborious and time consuming.

PCR-based methodologies are generally more specific, informative (immediate strain identification), sensitive, and faster. Although, a pre-enrichment step is still often needed, the simplicity and time saving feature of the PCR reaction has made it increasingly applicable for detection of bacterial pathogens.

PCR based ISO standard methods, such as ISO12869 rules how to detect Legionella

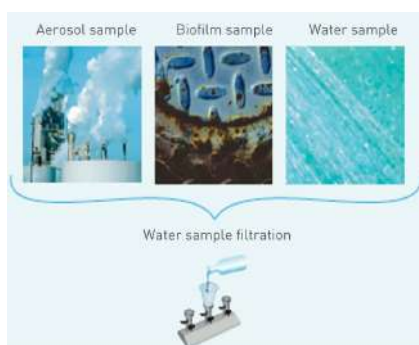
WORKFLOW OF ACTUAL METHODS WITH CONVERGENCE ON CONFIRMATION AND SEROTYPING STEP



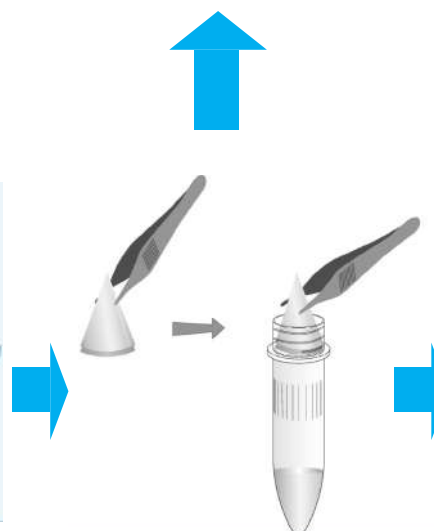
Confirmation and Serotyping of *L. pneumophila* by Latex



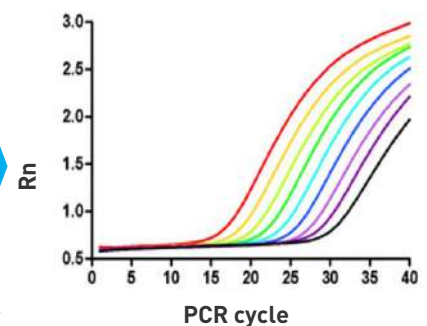
Confirmation and Serotyping of *L. pneumophila* by FLAME Fast *L. Pneumofia* and SG1 Multiplex kit



Water sample filtration

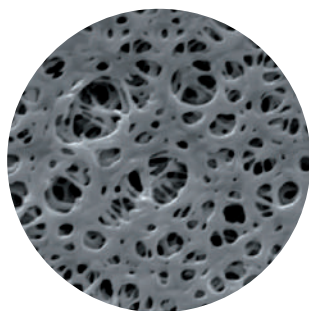


Extraction of Legionella DNA from



Detection and quantification of Legionella DNA by qPCR

Polyethersulfone (PES) Membrane



ULTRA^{Sep}
Polyethersulfone
Membrane

GVS Polyethersulfone (PES) Filtration Membrane is hydrophilic and cast from pure polyethersulfone polymer. It is designed to remove particulates during general filtration and its low protein and drug binding characteristics make it ideally suited for use in life science applications.

Product Uniformity and High Sensitivity Maximize Performance

This strong, microporous film asymmetric membrane is constructed from a high-temperature polyethersulfone polymer that is acid and base resistant. Its strength and durability are advantageous during usage that involves aggressive handling or automated equipment. GVS PES Filtration Membrane is naturally hydrophilic without added

wetting agents and has low extractables.

Due to its inherent uniform porosity and controlled pore size, GVS PES Filtration Membrane efficiently removes particulates from solutions during general filtration.

Features & Benefits

- Hydrophilic: Eliminates the need for wetting agents that can potentially interfere with analyses
- Low extractables: Ensures test results will not be compromised by wetting agents or other extractables
- Superior burst strength: Protects the integrity of the membrane under high pressure
- Lot-to-lot consistency: Quality checks, both down and across the membrane, ensure dependable results every time

Typical Applications

- Protein and enzyme filtration and sterilization
- Biological fluid filtration and sterilization
- Pharmaceutical sterilization
- Environmental water studies

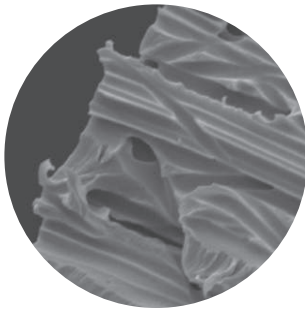
Performance

Pore Size (µm)	Flow Time (s)	Volume/Vacuum (mL/in Hg)	Flow Rate (mL/min/cm ² @ 10 psi)	Bubble Point (psi)
0,2	35-70	250/20	22.72-45.45	50-70

Ordering information

Product Code	Pore Size (µm)	Dimension (mm)	Description	Packaging
1226158	0.2 µm	47 mm	PES white sterile single packed	200/pk
1226159	0.4 µm	47 mm	PES white sterile single packed	200/pk

Polycarbonate Track Etched (PCTE) Membrane



PORETICS
PCTE Membrane

GVS Life Sciences Polycarbonate Track Etched (PCTE) Membrane is made from a thin polycarbonate film with precisely defined pores. The proprietary manufacturing process provides increased control over pore size and density for absolute size separation. This unique process ensures the physical properties of each membrane precisely fit specification.

Nominal Product Characteristics

Thickness	10 µm
Optical Properties	Semi-translucent
Maximum Operating Temperature	284°F (140°C)
Sterilization	Gamma Irradiation
Autoclavable	Yes
Wetting Characteristics	Hydrophilic

Characteristics

- Smooth, thin, glass-like surface is suitable for microscopy and cellular applications
- Superior strength allows for aggressive handling
- Resists chemical staining to ease microscopic visualization

Typical Applications

- Legionella test (UNI EN ISO 11731_2017)

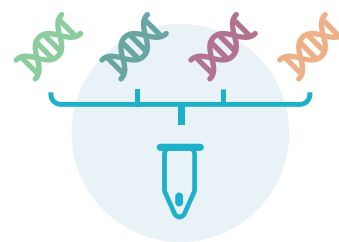


Ordering information

Product Code	Pore Size (µm)	Dimension (mm)	Description	Packaging
1226157	0.2 µm	47 mm	PCTE white sterile single packed	200/pk
1226156	0.4 µm	47 mm	PCTE white sterile single packed	200/pk

FLAME FAST ALL-IN-ONE QPCR KIT

A NEW ERA IN WATER ANALYSIS
with Membranes and E xtraction kit included



FAST, CERTIFIED, READY TO USE



ALL THE REAGENTS
PRE-DOSED AND
LYOPHILIZED IN THE
REACTION TUBES



TESTED AND VALI-
DATED PROTOCOLS

ENERGY SAVING

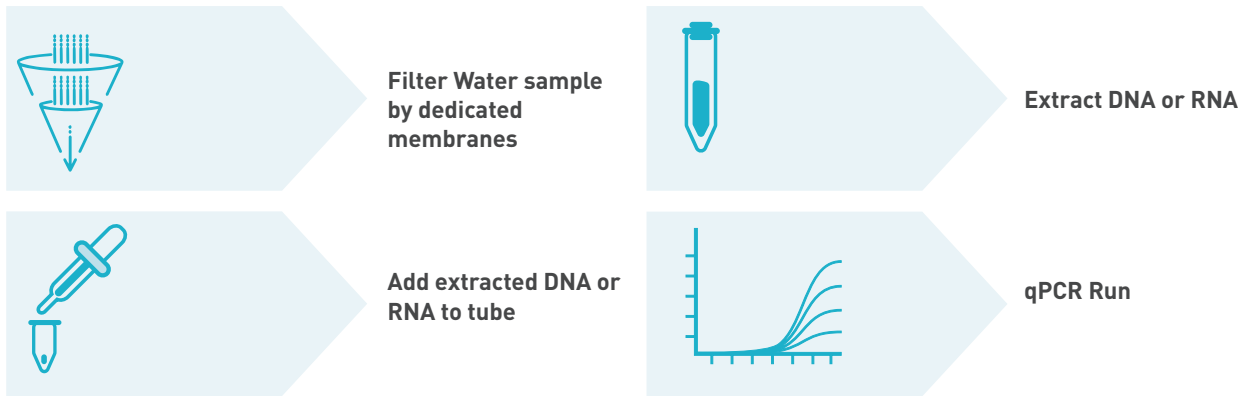
TRANSPORT AND STORAGE
AT ROOM TEMPERATURE

LONG SHELF LIFE

PRODUCT DURABILITY
24 MONTHS

FLEXIBILITY

AVAILABLE VERSION FOR MANUAL
OR AUTOMATIC (MAGNETIC BEADS)
EXTRACTION



AVAILABLE TARGETS FOR WATER ANALYSIS

Legionella pneumophila and Legionella spp.
[Compliance with NF T90-471, ISO 11731:2017 and ISO/TS 12869:2019]

Clostridium perfringens

Salmonella spp.

Campylobacter spp

Yersinia spp

Pseudomonas aeruginosa

Campylobacter spp. + Salmonella spp. + Legionella spp.

Clostridium perfringens + Yersinia spp. + Pseudomonas aeruginosa

AVAILABLE SIZE 48 OR 96 TESTS



QUALITY CERTIFIED

Zero risk of operator error, inhibition controls, ISO and relevant standards compliant.



COMPATIBILITY

Compatibility with main Real Time PCR instruments, validated with the principal extraction systems.



FAST

Simultaneous multitarget detection, little bit over one hour analysis, reduced hand on time, for RNA one step RT-PCR.



READY TO USE

No need to add anything else.



INNOVATION

Multiplex Assays to measure more targets by only one run.



RECLOSABLE BAG

Use one or more tubes, according to your needs.

Ordering information

Product Code	Description
FLFAIO1007Z48	FLAME FAST Clostridium perfringens ALL-IN-1 Kit - 48 rxn (0,1 tubes) (0,1 tubes)
FLFAIO1003Z48	FLAME FAST Salmonella species ALL-IN-1 Kit - 48 rxn (0,1 tubes) (0,1 tubes)
FLFAIO1004Z48	FLAME FAST Campylobacter species ALL-IN-1 Kit - 48 rxn (0,1 tubes)
FLFAIO1072Z48	FLAME FAST Yersinia species ALL-IN-1 Kit - 48 rxn (0,1 tubes)
FLFAIO1073Z48	FLAME FAST Pseudomonas aeruginosa ALL-IN-1 Kit - 48 rxn (0,1 tubes)
FLFAIO1113Z48	FLAME FAST L. pneumophila ALL-IN-1 Kit - 48 rxn (0,1 tubes)
FLFAIO1074Z48	FLAME FAST Legionella species ALL-IN-1 Kit - 48 rxn (0,1 tubes)
FLFAIO1075Z48	FLAME FAST Campylobacter sp-Salmonella sp-Legionella sp ALL-IN-1 Multi Kit - 48 rxn (0,1 tubes)
FLFAIO1076Z48	FLAME FAST Legionella pn-Legionella sp-Pseudomonas aerug. ALL-IN-1 Multi Kit - 48 rxn(0,1 tubes)
FLFAIO1007Z96	FLAME FAST Clostridium perfringens ALL-IN-1 Kit - 96 rxn (0,1 tubes)
FLFAIO1003Z96	FLAME FAST Salmonella species ALL-IN-1 Kit - 96 rxn (0,1 tubes)
FLFAIO1004Z96	FLAME FAST Campylobacter species ALL-IN-1 Kit - 96 rxn (0,1 tubes)
FLFAIO1072Z96	FLAME FAST Yersinia species ALL-IN-1 Kit - 96 rxn (0,1 tubes)
FLFAIO1073Z96	FLAME FAST Pseudomonas aeruginosa ALL-IN-1 Kit - 96 rxn (0,1 tubes)
FLFAIO1113Z96	FLAME FAST L. pneumophila ALL-IN-1 Kit - 96 rxn (0,1 tubes)
FLFAIO1074Z96	FLAME FAST Legionella species ALL-IN-1 Kit - 96 rxn (0,1 tubes)
FLFAIO1075Z96	FLAME FAST Campylobacter sp-Salmonella sp-Legionella sp ALL-IN-1 Multi Kit - 96 rxn (0,1 tubes)
FLFAIO1076Z96	FLAME FAST Legionella pn-Legionella sp-Pseudomonas aerug. ALL-IN-1 Multi Kit - 96 rxn(0,1 tubes)
FLFMAIO1007Z32	FLAME FAST Clostridium perfringens ALL-IN-1 Kit with Magnetic Beads - 48 rxn (0,1 tubes)
FLFMAIO1003Z32	FLAME FAST Salmonella species ALL-IN-1 Kit with Magnetic Beads - 32 rxn (0,1 tubes)
FLFMAIO1004Z32	FLAME FAST Campylobacter species ALL-IN-1 Kit with Magnetic Beads - 32 rxn (0,1 tubes)
FLFMAIO1072Z32	FLAME FAST Yersinia species ALL-IN-1 Kit with Magnetic Beads - 32 rxn (0,1 tubes)
FLFMAIO1073Z32	FLAME FAST Pseudomonas aeruginosa ALL-IN-1 Kit with Magnetic Beads - 32 rxn (0,1 tubes)
FLFMAIO1113Z32	FLAME FAST L. pneumophila ALL-IN-1 Kit with Magnetic Beads - 32 rxn (0,1 tubes)
FLFMAIO1074Z32	FLAME FAST Legionella species ALL-IN-1 Kit with Magnetic Beads - 32 rxn (0,1 tubes)
FLFMAIO1075Z32	FLAME FAST Campylobacter sp-Salmonella sp-Legionella sp ALL-IN-1 Multi Kit w/MB-32 rx(0,1 tubes)
FLFMAIO1076Z32	FLAME FAST Legionella pn-Legionella sp-Pseudomonas aeru ALL-IN-1 Multi Kit w/MB-32 rx(0,1 tubes)
FLFMAIO1007Z96	FLAME FAST Clostridium perfringens ALL-IN-1 Kit with Magnetic Beads - 96 rxn (0,1 tubes)
FLFMAIO1003Z96	FLAME FAST Salmonella species ALL-IN-1 Kit with Magnetic Beads - 96 rxn (0,1 tubes)
FLFMAIO1004Z96	FLAME FAST Campylobacter species ALL-IN-1 Kit with Magnetic Beads - 96 rxn (0,1 tubes)
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FLFMAIO1074Z96	FLAME FAST Legionella species ALL-IN-1 Kit with Magnetic Beads - 96 rxn (0,1 tubes)
FLFMAIO1075Z96	FLAME FAST Campylobacter sp-Salmonella sp-Legionella sp ALL-IN-1 Multi Kitw/MB-96 rx (0,1 tubes)
FLFMAIO1076Z96	FLAME FAST Legionella pn-Legionella sp-Pseudomonas aeru ALL-IN-1 Multi Kit w/MB-96 rx(0,1 tubes)
FLM01007B	FLAME FAST Clostridium perfringens qPCR detection Kit (24 rxn in 0,1ml clear tubes)
FLM01003B	FLAME FAST Salmonella qPCR species detection Kit (24 rxn in 0,1ml clear tubes)
FLM01004B	FLAME FAST Campylobacter species qPCR detection Kit (24 rxn in 0,1ml clear tubes)
FLM01072B	FLAME FAST Yersinia species qPCR detection Kit (24 rxn in 0,1ml clear tubes)
FLM01073B	FLAME FAST Pseudomonas aeruginosa qPCR detection Kit (24 rxn in 0,1ml clear tubes)
FLM01113B	FLAME FAST L. pneumophila qPCR detection Kit (24 rxn in 0,1ml clear tubes)
FLM01074B	FLAME FAST Legionella species qPCR detection Kit (24 rxn in 0,1ml clear tubes)
FLM01075B	FLAME FAST Campylobacter sp, Salmonella sp and Legionella sp qPCR detection Kit -24 rx(0,1 tub)
FLM01076B	FLAME FAST Legionella pn., Legionella sp and Pseudomonas aerug qPCR detection Kit-24 rx(0,1 tub)
FLFAIO1007T48	FLAME FAST Clostridium perfringens ALL-IN-1 Kit - 48 rxn (0,2 tubes)
FLFAIO1003T48	FLAME FAST Salmonella species ALL-IN-1 Kit - 48 rxn (0,2 tubes)
FLFAIO1004T48	FLAME FAST Campylobacter species ALL-IN-1 Kit - 48 rxn (0,2 tubes)
FLFAIO1072T48	FLAME FAST Yersinia species ALL-IN-1 Kit - 48 rxn (0,2 tubes)
FLFAIO1073T48	FLAME FAST Pseudomonas aeruginosa ALL-IN-1 Kit - 48 rxn (0,2 tubes)
FLFAIO1113T48	FLAME FAST L. pneumophila ALL-IN-1 Kit - 48 rxn (0,2 tubes)
FLFAIO1074T48	FLAME FAST Legionella species ALL-IN-1 Kit - 48 rxn (0,2 tubes)
FLFAIO1075T48	FLAME FAST Campylobacter sp-Salmonella sp-Legionella sp ALL-IN-1 Multi Kit - 48 rxn (0,2 tubes)
FLFAIO1076T48	FLAME FAST Legionella pn-Legionella sp-Pseudomonas aerug ALL-IN-1 Multi Kit - 48 rxn (0,2 tubes)
FLFAIO1007T96	FLAME FAST Clostridium perfringens ALL-IN-1 Kit - 96 rxn (0,2 tubes)
FLFAIO1003T96	FLAME FAST Salmonella species ALL-IN-1 Kit - 96 rxn (0,2 tubes)
FLFAIO1004T96	FLAME FAST Campylobacter species ALL-IN-1 Kit - 96 rxn (0,2 tubes)
FLFAIO1072T96	FLAME FAST Yersinia species ALL-IN-1 Kit - 96 rxn (0,2 tubes)
FLFAIO1073T96	FLAME FAST Pseudomonas aeruginosa ALL-IN-1 Kit - 96 rxn (0,2 tubes)
FLFAIO1113T96	FLAME FAST L. pneumophila ALL-IN-1 Kit - 96 rxn (0,2 tubes)

Ordering information

Product Code	Description
FLFAI01113T96	FLAME FAST L. pneumophila ALL-IN-1 Kit - 96 rxn (0,2 tubes)
FLFAI01074T96	FLAME FAST Legionella species ALL-IN-1 Kit - 96 rxn (0,2 tubes)
FLFAI01075T96	FLAME FAST Campylobacter sp-Salmonella sp-Legionella sp ALL-IN-1 Multi Kit - 96 rxn (0,2 tubes)
FLFAI01076T96	FLAME FAST Legionella pn-Legionella sp-Pseudomonas aerug ALL-IN-1 Multi Kit - 96 rxn (0,2 tubes)
FLFMAI01007T32	FLAME FAST Clostridium perfringens ALL-IN-1 Kit with Magnetic Beads - 32 rxn (0,2 tubes)
FLFMAI01003T32	FLAME FAST Salmonella species ALL-IN-1 Kit with Magnetic Beads - 32 rxn (0,2 tubes)
FLFMAI01004T32	FLAME FAST Campylobacter species ALL-IN-1 Kit with Magnetic Beads - 32 rxn (0,2 tubes)
FLFMAI01072T32	FLAME FAST Yersinia species ALL-IN-1 Kit with Magnetic Beads - 32 rxn (0,2 tubes)
FLFMAI01073T32	FLAME FAST Pseudomonas aeruginosa ALL-IN-1 Kit with Magnetic Beads - 32 rxn (0,2 tubes)
FLFMAI01113T32	FLAME FAST L. pneumophila ALL-IN-1 Kit with Magnetic Beads - 32 rxn (0,2 tubes)
FLFMAI01074T32	FLAME FAST Legionella species ALL-IN-1 Kit with Magnetic Beads - 32 rxn (0,2 tubes)
FLFMAI01075T32	FLAME FAST Campylobacter sp-Salmonella sp-Legionella sp ALL-IN-1 Multi Kit w/MB-32 rxn(0,2 tub)
FLFMAI01076T32	FLAME FAST Legionella pn-Legionella sp-Pseudomonas aerug ALL-IN-1 Multi Kit w/MB-32 rxn(0,2 tub)
FLFMAI01007T96	FLAME FAST Clostridium perfringens ALL-IN-1 Kit with Magnetic Beads - 96 rxn (0,2 tubes)
FLFMAI01003T96	FLAME FAST Salmonella species ALL-IN-1 Kit with Magnetic Beads - 96 rxn (0,2 tubes)
FLFMAI01004T96	FLAME FAST Campylobacter species ALL-IN-1 Kit with Magnetic Beads - 96 rxn (0,2 tubes)
FLFMAI01072T96	FLAME FAST Yersinia species ALL-IN-1 Kit with Magnetic Beads - 96 rxn (0,2 tubes)
FLFMAI01073T96	FLAME FAST Pseudomonas aeruginosa ALL-IN-1 Kit with Magnetic Beads - 96 rxn (0,2 tubes)
FLFMAI01113T96	FLAME FAST L. pneumophila ALL-IN-1 Kit with Magnetic Beads - 96 rxn (0,2 tubes)
FLFMAI01074T96	FLAME FAST Legionella species ALL-IN-1 Kit with Magnetic Beads - 96 rxn (0,2 tubes)
FLFMAI01075T96	FLAME FAST Campylobacter sp-Salmonella sp-Legionella sp ALL-IN-1 Multi Kit w/MB-96 rxn(0,2 tub)
FLFMAI01076T96	FLAME FAST Legionella pn-Legionella sp-Pseudomonas aerug ALL-IN-1 Multi Kit w/MB-96 rxn(0,2 tub)
FLM01007	FLAME FAST Clostridium perfringens qPCR detection Kit (24 rxn in 0,2ml clear tubes)
FLM01003	FLAME FAST Salmonella qPCR species detection Kit (24 rxn in 0,2ml clear tubes)
FLM01004	FLAME FAST Campylobacter species qPCR detection Kit (24 rxn in 0,2ml clear tubes)
FLM01072	FLAME FAST Yersinia species qPCR detection Kit (24 rxn in 0,2ml clear tubes)
FLM01073	FLAME FAST Pseudomonas aeruginosa qPCR detection Kit (24 rxn in 0,2ml clear tubes)
FLM01113	FLAME FAST L. pneumophila qPCR detection Kit (24 rxn in 0,2ml clear tubes)
FLM01074	FLAME FAST Legionella species qPCR detection Kit (24 rxn in 0,2ml clear tubes)
FLM01075	FLAME FAST Campylobacter sp-Salmonella sp- Legionella sp qPCR detection Kit-24 rx(0,2 tubes)
FLM01076	FLAME FAST Legionella pn-Legionella sp-Pseudomonas aerug qPCR detection Kit-24 rxn(0,2 tubes)
FLB01014	FLAME Fast DNA Extraction kit from clear water (24 rxn)
FLB21009	FLAME Fast DNA Extraction kit from food (24 rxn)
FLB0270	FLAME BEADS UNIVERSAL DNA/RNA EXTRACTION Kit 96 test
FLB0271	FLAME BEADS UNIVERSAL DNA/RNA EXTRACTION Kit PreFilled Plate 96 test
FLB0273	FLAME BEADS UNIVERSAL DNA/RNA EXTRACTION Kit PreFilled Plate 64 test
FLB0010	FLAME BEADS Lysis Buffer 30 ml
FLB0011	FLAME BEADS Lysis Buffer 125 ml
FLB0268	FLAME BEADS Carrier 1 mg
FLB0269	FLAME BEADS Carrier Buffer 1.2 ml
FLB01009	FLAME Fast free DNA inactivator - 200 test
FLB02014	FLAME Fast DNA Extraction kit from dirty water (24 rxn)

