

Filterpid Fast Filtration

Catalog number: 211-10-00

Package insert

Filtration device to concentrate the organisms in water samples and to obtain prepared samples to be analysed by Legipid[®], Cleanpid[®] or others technics.

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I. INTRODUCTION

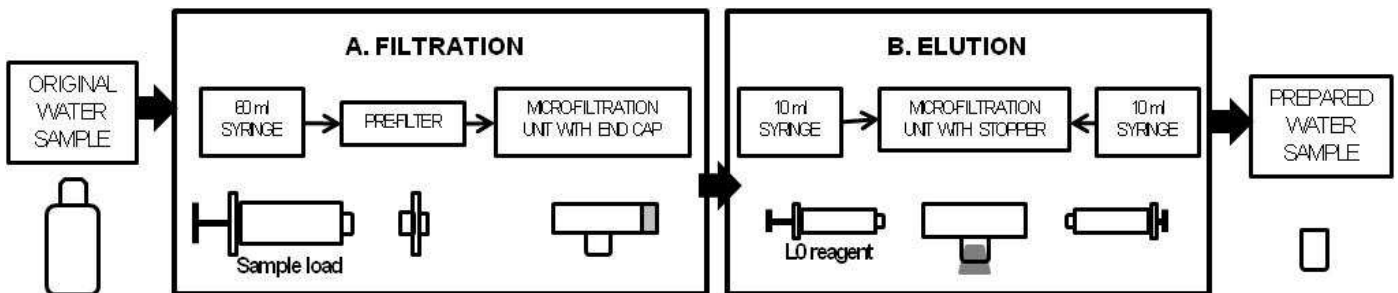
The most important application for conventional membrane filtration in microbiological laboratories remains water testing, based on culturing microorganisms from the test sample. Typically, samples are filtered through a membrane filter and the filters are then transferred to the surface of agar plates containing prescribed media. The filters can also be deposited into a flask to be eluted by shaking. However, the method used for re-suspension of organisms after membrane filtration may result in considerable loss of organisms. Moreover, culture methods have long incubation times. In this context, a good solution consists in combining an easy filtration method with a fast detection method of microorganisms to reduce the total time of the analysis. Filterpid provides a filtration device capable of being rapidly prepared by utilizing a cartridge of hollow fibers, which can easily be assembled even by unqualified personnel.

Some of the main advantages using filterpid:

- ◆ Avoids the use of vacuum pumps
- ◆ Avoids the need to autoclave
- ◆ Eliminates centrifugation
- ◆ Reduces working time
- ◆ Improves recovery rates
- ◆ Increases filtration throughput
- ◆ Allows an easy elution in the recovery step, prior to analysis by Legipid® or Cleanpid®

II. THE Filterpid TECHNOLOGY

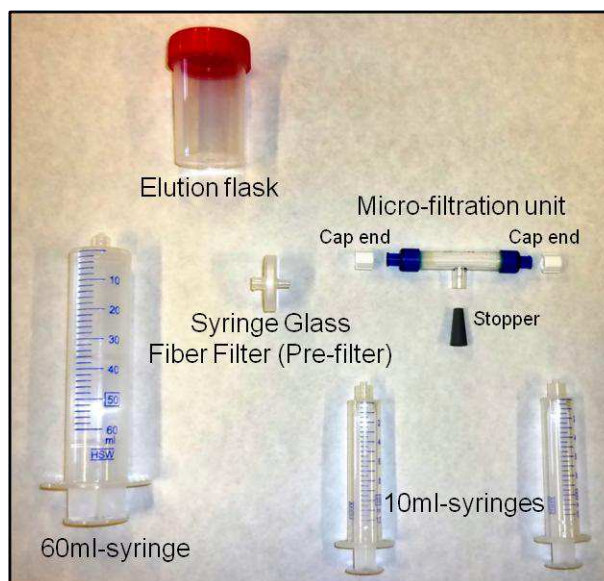
Filterpid (Cat. No. 211-10-00) is an easy and complete solution to prepare a sample to be analysed by rapid test. It shows superior separation performance of the *Legionella* organisms from the original water samples. Original water includes pure water, river water, tap water, and industrial water. The assembled system comprises a 60 ml-syringe connected to a pre-filter (syringe glass fiber filter), so a water-flux remarkably larger than that of the conventional filtration method. In turn, the prefilter is connected to a hollow fiber filter (0.2µm nominal pore size) in a compact cartridge (the micro-filtration unit) with an end cap. Filterpid can be used without any pump. Original water sample pass through the centre of the hollow fibers by manually pushing the 60 ml-syringe (positive pressure). The bacteria are then retained inside the hollow fiber filter (retentate). Micro-filtration unit is connected to two 10ml-syringes each one at one end of the unit. Following the protocol, bacteria are eluted by a back-flushing mechanism with a stabilizing agent L0 (not supplied). The final suspension is the prepared sample that can be analysed by the Legipid® test or Cleanpid® test. This system includes the following 2 main steps:



III. KIT REAGENTS AND COMPONENTS

Filterpid kit is provided as a bag including all the components necessary for 1 filtration (reference ID 211-10-00). Filterpid can be used as a step prior to Legipid® Legionella Fast Detection test (reference ID 311-10-00) or Cleanpid® Easy Purification Kit (reference ID 611-10-00). Then, diluent L0 (reference ID 311-10-L0) is supplied with the Legipid® test or can be acquired separately. The reference ID 211-10-00 contains the components indicated in the following table.

Reference ID	Component	Quantity Provided (unit)
311-10-FE	Elution flask	1
211-10-SFV	Syringe Glass Fiber Filter	1
211-10-CT40-LL	Micro-filtration unit	1
211-10-SLL10	10 ml -syringe (Luer Lock connection)	2
211-10-SLL50	60 ml-syringe (Luer Lock connection)	1
211-10-STP	Stopper	1
211-10-FSTP	Cap end	2



IV. STORAGE CONDITIONS

Filterpid must be stored at room temperature.

V. MATERIAL REQUIRED BUT NOT SUPPLIED

Graduated container for the filtration step.

Filterpid (Cat. No. 211-10-00) is provided with a filtration manual. Either a syringe or peristaltic pump (AC/DC, around 200 rpm) can drive the original water sample through the fiber lumen of the micro-filtration unit. Finally, micro-filtration unit can also be connected directly to the waterworks by an adapter.

VI. PRECAUTIONS AND RECOMMENDATIONS FOR BEST RESULTS

- ◆ The performance of the filtration depends on the correct execution of the protocol.
- ◆ Check that the components are correctly assembled, based on female/male luer connections.
- ◆ If you use a pump to drive the water sample, check that pressure does not exceed 2 kg/cm².

VII. PROTOCOL

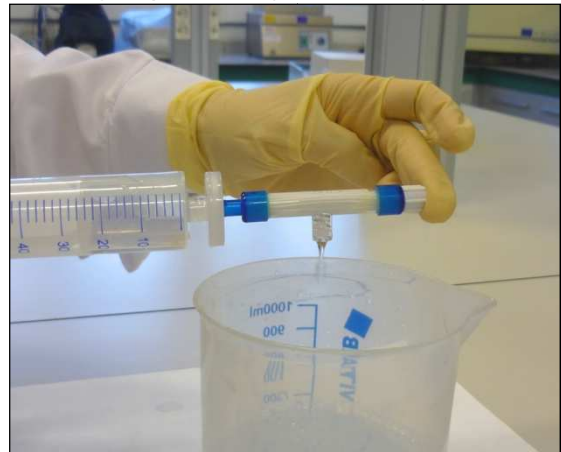
Before starting please check all the components have been supplied. Material is not reusable.

A. Filtration step

1. Remove one unit of the micro-filtration device from packaging.
2. Connect the pre-filter (male luer) to the pointed end of the unit (female luer)

3. Load the 60ml-syringe with original water sample.
5. Place T-piece section of the micro-filtration unit on a container.
6. Push the water sample through the micro-filtration unit.
7. Disconnect the empty syringe from the pre-filter.
8. Complete original water sample by repeating step 3 to 7.
9. Push only air after total water sample is filtered.
10. Disassemble the 60ml-syringe and pre-filter from the unit(*)

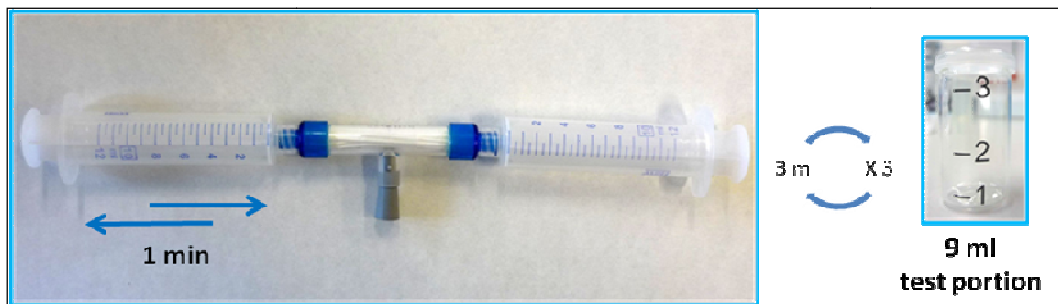
4. Connect the filled syringe (male luer lock) to pre-filter (female luer)



(*) If the cells retained are not going to be eluted immediately, put the lid to the end point with the stopper, fill the unit with L0, and store at 4°C until use.

B. Elution step

1. Add 10 ml of the L0 reagent into graduated elution flask.
2. Remove the end cap from the microfiltration unit.
3. Connect one empty 10ml-syringe to microfiltration unit.
4. Take 3 ml of L0-reagent with the other 10ml-syringe.
5. Connect the filled 10ml-syringe elution to the other end of the micro-filtration unit.
6. Close filtrate exit point (T-piece) with a stopper (see figure below).
7. Push the liquid through the micro-filtration unit until the liquid passes into the second 10ml-syringe.
8. Pull back the first 10ml-syringe to recover the liquid.
9. Repeat steps 7 and 8 along 1 minute time
10. Remove a 10ml-syringe from the micro-filtration unit and then push the volume into the cuvette (**)
11. Repeat two more times with 3 ml each time, completing a final volume of 9 ml.



(**) cuvette (reference ID 311-10-CB) is supplied with the Legipid® test.

Prepared water sample is ready to be tested by Legipid® or Cleanpid®.

Code:	<p>For technical assistance please contact: Biótica, Bioquímica Analítica, S.L. Science and Technology Park, Jaime I University Espatec 2 building, ground floor, lab 2 Castellón 12071, Spain www.biotica.es info@biotica.es Tel.: +34 964108131 Fax: +34 964737790</p>	
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