



WaterSpy

High sensitivity, portable photonic device for
pervasive water quality analysis

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PHOTONICS²¹

PHOTONICS PUBLIC PRIVATE PARTNERSHIP



www.waterspy.eu

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WaterSpy news

WaterSpy is taking advantage of advances in cutting edge **photonic** devices, in order to provide new capabilities in water analysis. The aim of the WaterSpy team is to develop a device that will require less than a couple of hours for a full water sample analysis of 100 mL, in search for three heterotrophic bacterial cells (*E.coli*, *Salmonella*, *P.aeruginosa*). This is in line with the EC and national regulations that require that no bacteria should be present in a sample of 100 mL of drinkable water. With the aim to develop the WaterSpy device, during the first ten months, the consortium has been working on the identification, through ATR experiments, of the FT-IR bands of the selected bacteria. The fingerprint regions of the bacteria were identified and some differences in the spectra were noticed. The ATR spectra for the three different bacteria can be seen in **Figure 1**.

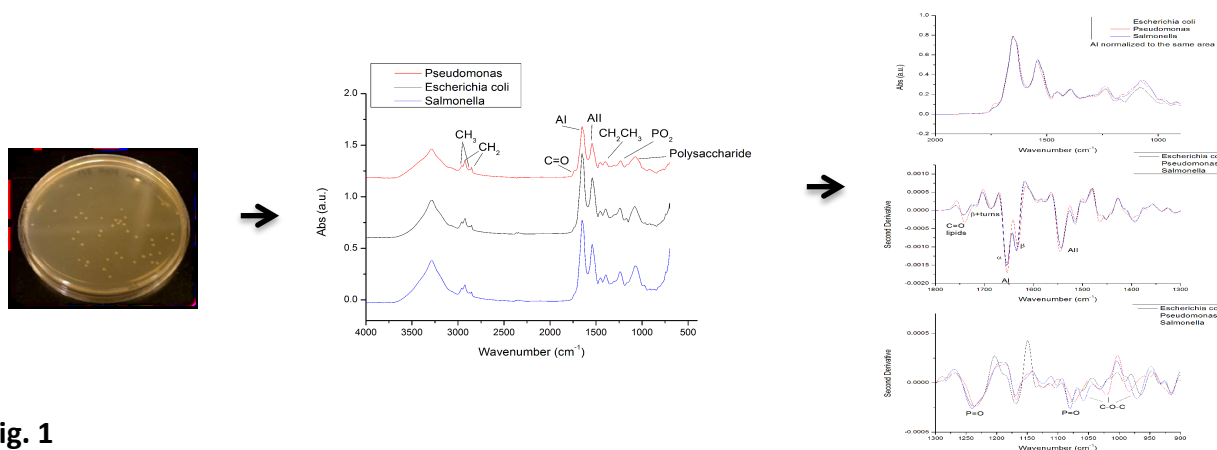


Fig. 1

In parallel, with the aim to develop the bio-sensing “smart surface” needed to capture and concentrate the bacteria in the water sample, antibodies able to bind the targeted bacteria were developed. The protocol used is summarised in **Figure 2**.

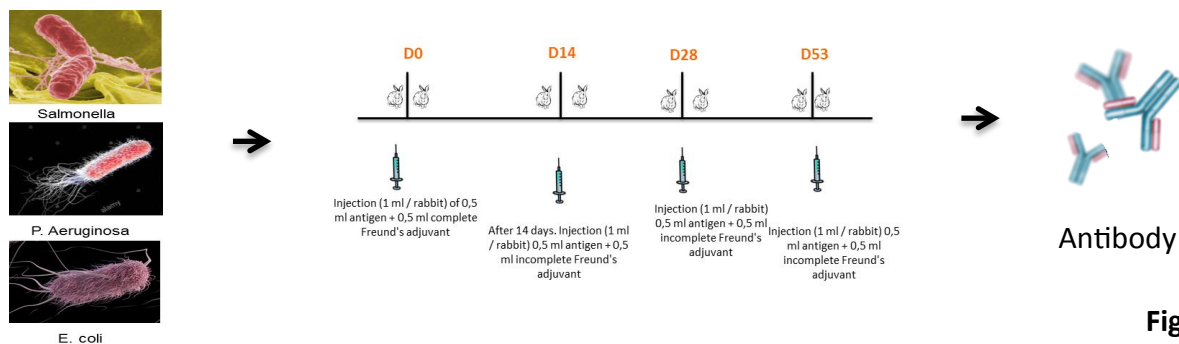
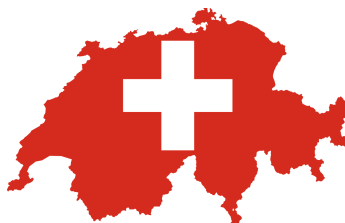


Fig. 2



WaterSpy 6M Meeting in Switzerland



The WaterSpy **6M** meeting was hosted on the 30th-31st May 2017 in St. Blaise (Neuchatel), Switzerland, where ALPES is based. All partner organizations attended the event. During the first day of the meeting, administrative procedures were discussed, while an overview of main active and completed tasks took place. The second day of the meeting was dedicated to a more detailed and open technical discussion on the main issues that have to be dealt with in the next period.



Planned events:

- The next WaterSpy consortium meeting (M12) will take place in Warsaw, Poland, where VIGO is based. The focus now is on the development of the first prototypes of all WaterSpy modules, due for M18.
- The first project review meeting has also been scheduled for December, after a request by the EC. The meeting will take place in Brussels.
- CyRIC is going to participate in the NI Days event in Lebanon in September 2017, where the WaterSpy project is also going to be presented. CyRIC will also attend the Web Summit 2017 event in Portugal in November. The project is going to be discussed with stakeholders. WaterSpy will also be represented in EBN Tech Camp (October 2017 – CyRIC).
- AUG will showcase WaterSpy as an essential future component to be integrated into the TRITON online water monitoring platform in the Water Environment Federation's Annual Technical Exhibition and Conference (WEFTEC) – October 2017, Chicago.

WaterSpy Consortium

