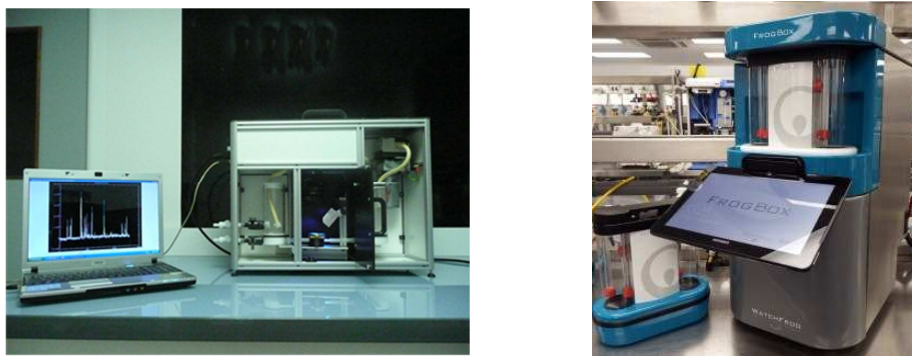


## FROGBOX, NEW DEVICE TO ASSESS THE WATER QUALITY ON SITE.

After several months of research and development as part of the BIOTTOPE project, partners WatchFrog, VERI and the company ELGA LabWater, finalized the construction of the first industrial prototypes of the reading flow system (figure 1). This new device, the FrogBox, will evaluate the possible presence of endocrine disruptors in complex aqueous matrices directly on site. The determination of the endocrine disruptive effect is based on the use of small aquatic biological models (Xenopus tadpoles and fry of the Medaka fish) associated with genetic markers to be fluorescent when they are in contact with endocrine disruptors. In the FrogBox, biological models circulate through a transparent measuring cell, where the level of fluorescence emission will be directly measured.



**Figure 1.** FrogBox evolution. Pre-prototype (left) and industrial prototype (right) developed in the BIOTTOPE project.

The installation of this equipment is simple and fast, it is only to connect the measuring instrument to the water to be tested (figure 2). The new main functions of the industrial prototype compared the pre-prototype are:

- Image acquisition equipment (camera, sensor and lamp LED) more efficient.
- More intense images.
- Image processing.
- Automatic rinsing.
- Dechlorination of water.
- Touch pad to control the equipment.
- Water heating.
- Malfunction alarms.



**Figure 2.** Installation of Frogbox for the assessment of the Actiflo® Carb effluent quality.

With these industrial prototypes it will be possible to test and optimize multiple parameters operating within the BIOTTOPE project to reach a high level of automation and reliability.