

## Early Warning System for pathogens in reclaimed/recycled water: AQUATRACK®

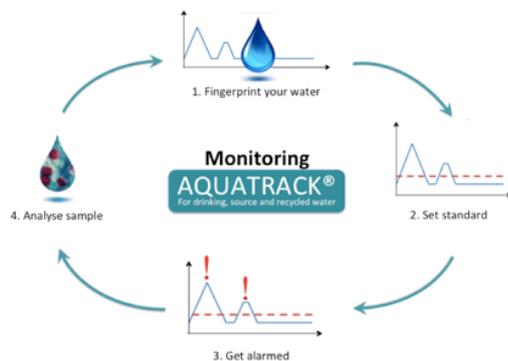
Aqua-Q AB, Sweden

### DESCRIPTION:

Aqua-Q's early warning system for water, AQUATRACK® is an optical laser based online sensor system equipped with automatic sampler. AQUATRACK® **detects all possible form of variations** caused by contamination (natural, human error, process failure) in reclaimed and recycled water. The system has the ability to communicate wireless and access data remotely. Our software creates a **dynamic fingerprint** based upon the micro contaminants in the water. The system analyses in real time micro particles in a flow of water and characterizes them based upon their size, shape and density. When specific particle size and shape



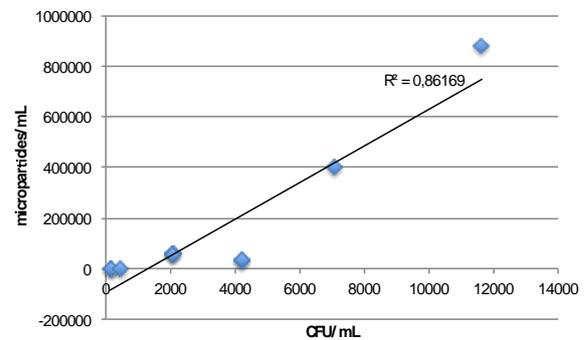
of pathogens are detected the sensor alarms and collects a water sample. AQUATRACK® provides preventive information of technical breakdown in a process, and reports to management changes in water quality.



- 1) Connect AQUATRACK® to your water stream and always access the water quality changes wireless.
- 2-3) Decide a highest amount of water quality variations of your process water and get alarmed when variation occurs.

4) The variation that trigger the alarm is automatically sampled and stored for further analysis.

The graph illustrates a real time example of AQUATRACK® monitoring treated waste water. The increased values triggering the automatic sampler is plotted against the amount of Heterotrophs (Total Count) measured by MBS MultiReader. A correlation of



86% between the triggered alarms and bacteria count was found.

### APPLICABILITY AND PRE-REQUISITES:

#### Applicability:

AQUATRACK® gives early warning to the management of the plant when there is a deviation in water quality and increased risk for pathogens and possibilities for filter break through and system break down.

#### Pre-requisites:

Connect AQUATRACK® to a partial flow of the water system, 220-240 V AC and a floor drain or a circulating pump. Place the system in a clean indoor atmosphere at normal room temperature without condensation

### OPERATION AND MAINTENANCE:

Minimum energy consumption and maintenance.  
Traceable calibration once/year.

### COSTS:

AQUATRACK® 1.200-1.500 Euro/month depending upon the business model.

**REFERENCES:** Hammarby Sjöstadverket, Stockholm, Sweden and La Bisbal d'Empordà, Spain.