



Introduction

UV-Vis spectrometry can be used to monitor changes in water quality. The aim of WP3.5.2 is the exploitation of this ability of on-line UV/Vis spectrometry to monitor distribution networks and manage the large number of monitoring stations needed for this task as well as manage the large amount of measurement data generated in such an application. Furthermore, in WP3.5.2 a portable monitoring station has to be developed.

Importance

Drinking water of high quality is produced in waterworks. Although this water meets all quality standards set by the WHO and the EU when the treatment processes function properly, this is not a guarantee that the customer will receive this water quality when he opens the tap. Changes to water quality can and do occur during distribution. Up until now, practically no online quality measurements are being performed in the distribution network. This is due to various reasons, e.g. 1) most analytical techniques are not suitable for operation in the distribution network 2) no networks exist to carry the measurement results to a central monitoring system where the overall picture on water quality can be tracked.

In case of investigative work or in case of emergencies, it is very valuable to have a portable monitoring station. A portable station allows the use of a highly capable sensor without the need for any infrastructural provisions on site. This means the system can be deployed to any measurement site at short notice. This offers flexibility (useful during investigative work) and quick response (for emergencies).

Approach

Building upon the successful s::can spectro::lyser™ submersible UV/Vis spectrometer, which can be operated in the distribution network or even directly within the water pipes, all the components needed for a portable monitoring station will be created.

Result

Two components required for the station, the controller for the sensor and a compressor unit for automatic cleaning of the sensor, required adaptation to the portable power supply. These adaptations were made, and a full station is now available that can be transported into and operated in the field without need for any additional infrastructure.

More information

Full details on this deliverable can be found under D3.5.5. Further information can be requested from:

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