Project for improving safety and sensory properties of drinking water
SmartChlor project is successfully completed

SmartChlor project, implemented in a consortium together with Inno-Water Zrt., as consortium leader, Budapest Waterworks, and Water Science Faculty of the National Public University, completed at the end of June 2020.

The objective of the international, three-year research program was to implement an OKOSKLÓR (SMARTCHLOR) system. In the last, third year, the model of reduced amount of chlorine established on the basis of earlier laboratory and semi works experiments, was tested and fine-tuned in practice, during measurements implemented in "living" drinking water network. Based on this, the methodology of practical application of this model has been created. Despite the Coronavirus pandemic, the test campaign planned for this year has been successfully and efficiently finished, as well as the research and development tasks have also been completed by Budapest Waterworks with success, which - based on on-line measurements data – makes it possible to adapt the amount of free chlorine added at post-disinfection points to the expected consumption, water quality and hydraulic conditions. This methodology has proved to be successful when applied in the zones of Budapest Waterworks' operation area. Open source software applied during the development of hydraulic and water quality models provides significant amount of flexibility, which also makes it easier to use the models separately from the network operated by Budapest Waterworks.

By applying the hydraulic model of Budapest Waterworks, we determined the significant points in the drinking water network in terms of reduced amount of chlorine. The average free chlorine concentration can be reduced by establishing more post-disinfection points in the drinking water network, while measured free chlorine content ensuring disinfection of drinking water can be maintained at every point of the network and there is no threat to the continuously excellent water quality. As a result of optimal allocation of post-disinfection points determined on the basis of the above results, healthy and at the same time pleasant tasting drinking water can be provided to all consumers at every point of the drinking water network, containing minimum possible amount of chlorine.

Project data
Project name: „Development of smart chlorination system for the reduction of operational costs and public health risk"
Short title of the project: OKOSKLÓR (SMARTCHLOR)
Project ID number: TÉT_15_IL-1-2016-0013
Supporter: National Research, Development and Innovation Office