

Piloting in Ādaži and Viimsi

Tallinn University of Technology



Event / Date

Organisation
Contact



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Objectives of the piloting

To compare different conventional tertiary treatment technological solutions for phosphorous removal and heavy metals removal in WWTP, what are receiving industrial wastewaters;

To analyze, whether it is possible to achieve better treatment efficiencies, when we manipulate the existing or new tertiary treatment step (increasing the pH to decrease the solubility of heavy metals etc).

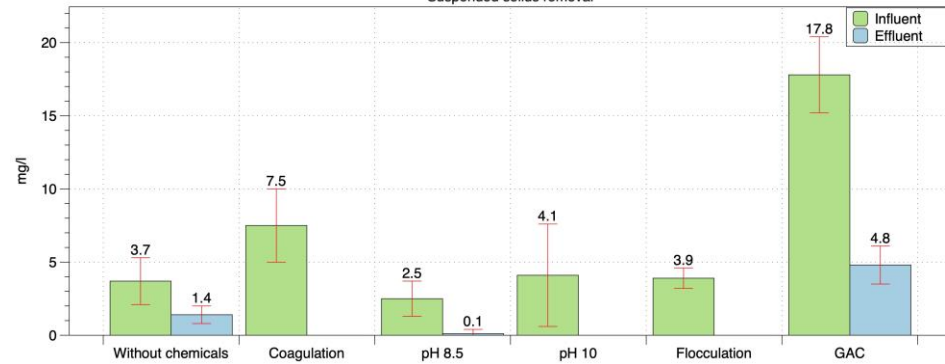
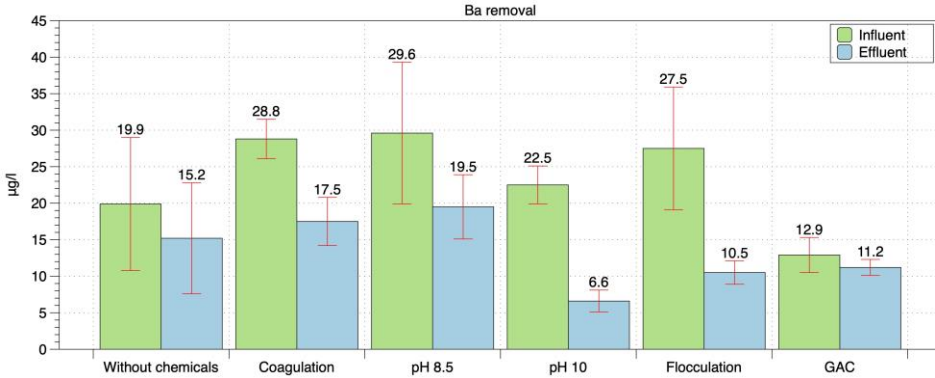
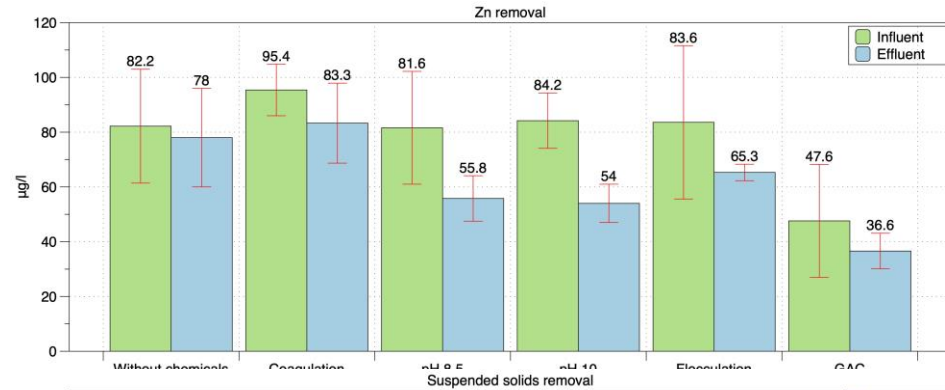
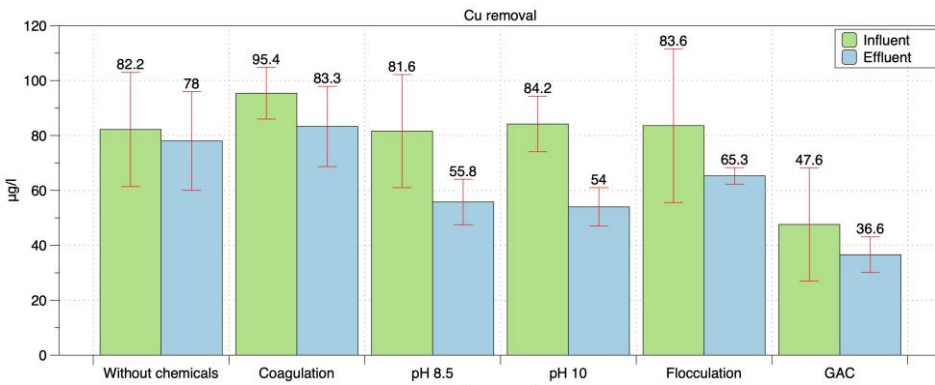
Piloting in Ādaži

Ādaži is a small city in Latvia, with a population about 11 400. The local wastewater treatment plant is a conventional activated sludge system without an tertiary treatment step. The influent comes mostly from the households, but the city has different industries too, like potato processing factory. In Ādaži the same regimes in the piloting were conducted, like in Tartu and Kohtla-Järve.

- Sand filter without chemicals;
- Coagulation;
- Manipulating the pH to 8.0;
- Manipulating the pH to 10.0;
- Flocculation;
- GAC (granular activated carbon);



Some results from Ādaži



Piloting in Viimsi

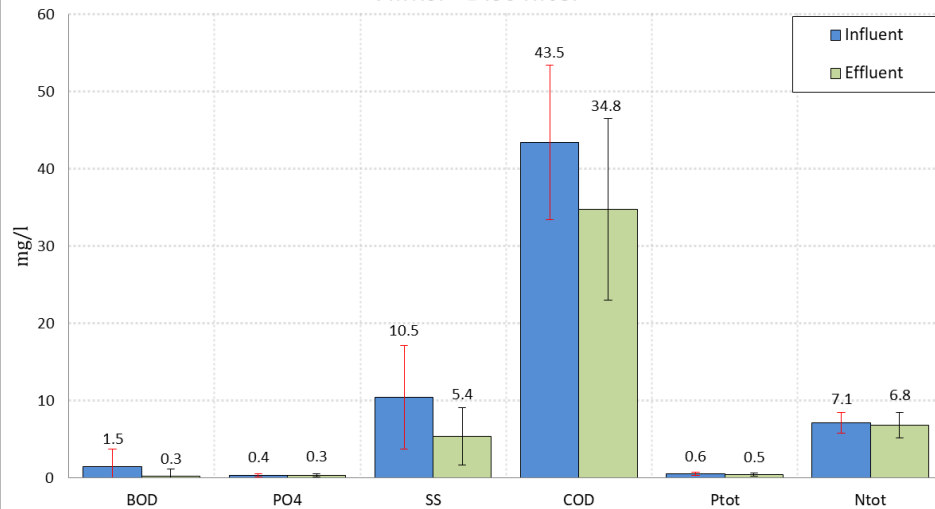
In Viimsi piloting where carried out at the local wastewater treatment plant, where we have a loading of 18 500 p.e. Viimsi WWTP receives industrial wastewater from Muuga harbor. What is forming ca 6% of total flowrate. In Viimsi some different regimes where conducted, than in other 3 WWTP.

- Taking samples from existing disc-filter;
- Flocculation;
- Zeolite adsorption;
- $\text{MnSO}_4 + \text{KMnO}_4$ (in some other studies >90% Cr removal was achieved);
- Green sand filtration.

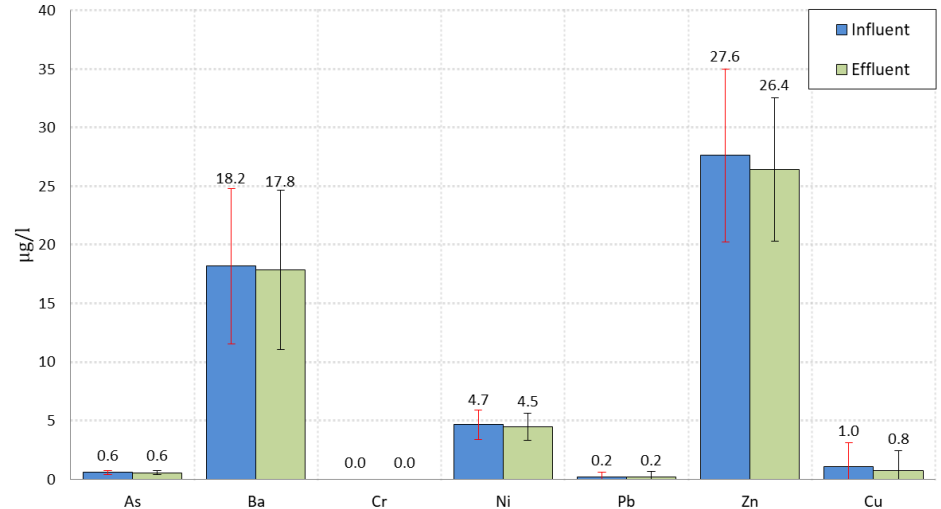


Some results from Viimsi

Viimsi - Disc filter



Viimsi - Disc Filter



Some results from Viimsi

