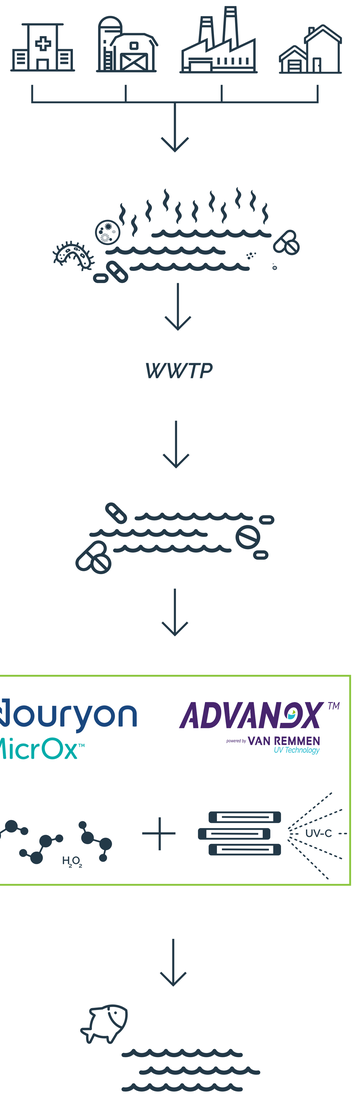
ADVANOX™

Innovative removal of micropollutants for clean and safe water for everyone

VAN REMMEN UV Technology

In partnership with Nouryon



Wastewater from households, hospitals, agriculture and industry is discharged into the sewer system.

The wastewater treatment plant removes many pollutants such as nutrients and organic material.

But is unable to remove persistent micropollutants such as pharmaceuticals, pesticides, and industrial compounds.

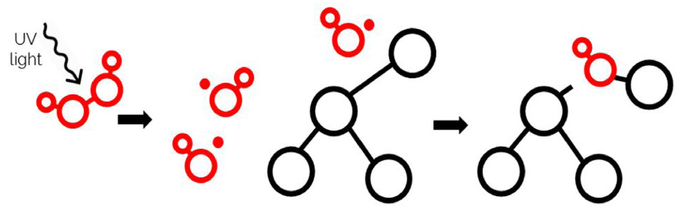
Advanox™ uses UV-C light and MicrOx™ hydrogen peroxide to break down these micropollutants in an Advanced Oxidation Process.

Water free from pharmaceuticals and other micropollutants is discharged into lakes and rivers with increased biological and ecological safety.

How it works

Advanox™ in combination with MicrOx™ is a powerful technology that can be used as polishing step to oxidize persistent micropollutants. It is added for example after the final step of a classic WWTP.

First MicrOx™ hydrogen peroxide is finely dispersed in to the water stream. Then, the water passes through the Advanox™ UV-C reactor which is optimized for advanced oxidation. The UV-C light transforms the MicrOx™ hydrogen peroxide in the Advanox™ reactor into powerful oxidative hydroxyl radicals. In the Advanox™ reactor the pollutants are oxidized in a couple of milliseconds and the final products are CO_2 and H_2O. After potentially removing any remaining peroxide the water can be safely discharged or reused.



The purpose

- Safeguard water quality
- Protect and support biodiversity
- Support circular economy
- Avoid contamination of soil and underground water reservoirs

Benefits

- Efficient technology
- Eco-friendly product
- Cost-efficient treatment
- Easy to operate
- Flexible, high safety & small footprint
- No Bromate or NDMA formation
- Removal of a wide array of organic micropollutants
- Photolysis and Oxidation
- No residue: sludge, concentrate, particles

Application

- 1–500 m3/h per Advanox™ reactor
- 80-99% removal efficiency
- Wastewater, ground water, Industrial water, drinking water, water reuse.

Pure removal, easy & clean