

Micropollutants and nutrient removal

Nijhuis Saur Industries (NSI) leads the way in micropollutant and nutrient removal, offering cutting-edge technologies. Our innovative and cost-effective solutions empower industrial and municipal wastewater operators to meet regulatory standards and minimize their environmental footprint.



Removing nutrients and micropollutants

Micropollutants, persistent contaminants from daily life, jeopardize water purity. To counter this, the EU's 2024 wastewater directive enforces 80% removal from treatment plants by 2045, protecting both ecosystems and human health.

Effectively treating micropollutant-contaminated wastewater is a complex challenge. There's no one-size-fits-all solution; effective removal requires a tailored blend of technologies, carefully calibrated to specific wastewater characteristics and local regulations. This is where NSI excels. We partner with you to develop comprehensive, sustainable solutions that address your unique micropollutant challenges.

Our approach prioritizes minimizing both your total cost of ownership and environmental impact. Furthermore, by choosing NSI, you gain access to the technologies such as BODAC®, representing the latest innovation in the field.

Your benefits working with us

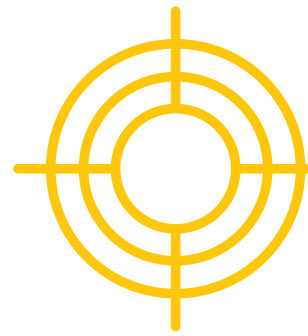
- + Expert Micropollutant Solutions:** Tailored treatment plans addressing your specific wastewater composition and local regulations.
- + Minimized TCO and Carbon Footprint:** Optimized systems designed for cost-effectiveness and environmental responsibility.
- + Access to Cutting-Edge Innovation:** Including advanced technologies like BODAC® for superior micropollutant removal.
- + Sustainable Partnerships:** Driving sustainability and empowering you to reach your environmental KPIs.
- + Comprehensive Support:** From initial assessment to ongoing maintenance, ensuring optimal system performance.
- + Global Reach, Local Expertise:** Leveraging our Nijhuis Saur Industries network for seamless support worldwide.

«Our large portfolio of micropollutants removal solutions ensures the best technology selection meeting your target removal and design consideration needs»

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Target removal matrix for micropollutants and nutrients



Goal for removal	MicroOxi			MicroSorbi			MicroNutri				
	O3	O3- Peroxide	O3 - UV	Carbo Plus (MAC)	PAC	1- STEP (GACF)	O3- STEP (O3+ BACF)	(O3+ HR- ICSF)	BACF	Ozone strongwater (O3+ BODAC)	BODAC
Total Phosphorus (with coagulant)											
Ammonium											
Total Nitrogen (with C - source)											
TSS											
COD											
Medicines / Antibiotics											
PFAS/PFOA											
Bacteria/pathogens											

Legenda

	No
	low performance
	medium performance
	high performance

Design choices matrix

Benefits	MicroOxi			MicroSorbi			MicroNutri				
	O3	O3- Peroxide	O3 - UV	Carbo Plus (MAC)	PAC	1- STEP (GACF)	O3- STEP (O3+ BACF)	(O3+ HR- ICSF)	BACF	O3 + BODAC including OSW	BODAC
CO2 footprint											
Avoid Bromate formation											
Area footprint (m2)											
Operational flexibility											
Modular Build											
Robustness											
TOTEX											

Legenda

	Not known / No
	Good
	Very good

BODAC®: The Future of Sustainable Water Treatment



About BODAC®

BODAC® represents the future of sustainable water treatment, offering a pioneering solution for water reuse and micropollutant removal. This innovative technology, combining BioActive® carbon and Ozone Strong Water (OSW), a powerful oxidation process developed with Air Liquide, achieves superior purification, including over 80% pharmaceutical residue removal, while significantly reducing TCO and environmental impact.

Proven references

Proven in long-term applications like WWTP Emmen, BODAC® minimizes chemical use, extends membrane lifespan, and delivers the lowest TCO. Through a 2024 licensing agreement between NieuWater, Jotem, and Nijhuis Saur Industries (NSI), BODAC® is now poised for global expansion, providing cost-effective and future-proof water solutions for both small and large-scale projects.

**«Two leading Dutch water authorities already choose BODAC® & OSW
and two more are piloting »**

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Success stories



BODAC® - Emmen, NL
Ultra pure water



O3+GAC - Winterswijk, NL
Sewage treatment plant



O3 +H2O2 - Pharmaceutical plant, NL
Industrial wastewater treatment plant



O3+ H2O2 - Hapert, NL
Sewage treatment plant



PACAS - Noord Leiden, NL
Sewage treatment plant



Carbo plus - Sanofi, France
Drinking water plant



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Discover our complete water solutions and services portfolio:
www.nijhuissaurindustries.com

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