

Removal of micropollutants in the Wendlingen am Neckar WWTP

Specification of the plant:

Treatment capacity	[PE]	170,213
Load	[PE]	130,000
Inflow volumes:		
▪ Dry weather flow	[l/s]	350 - 400
▪ Max. wet weather flow	[l/s]	1,428
▪ Annual wastewater volume	[m³/a]	16,500,000



Process technology:

Mechanical treatment	Fine screen, sand and grease trap, primary clarifier
Biological treatment	Pre-denitrification, nitrification, secondary clarifier
Chemical treatment	Phosphate precipitation: simultaneous
Elimination of micropollutants	Separate PAC stage (Ulmer process)
Filter	Cloth filter



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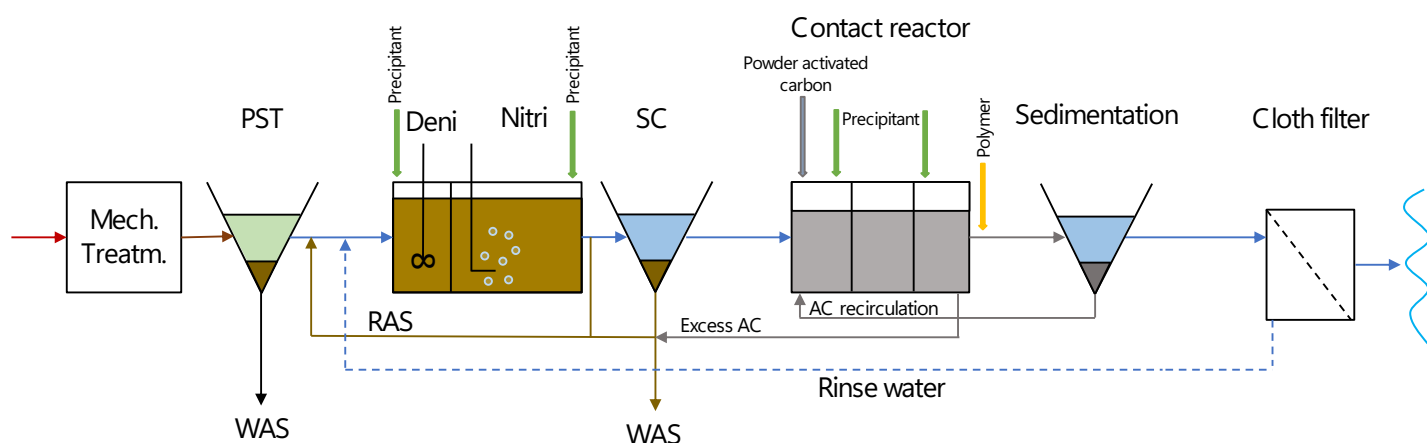


Fig. 1: Process diagram of the Wendlingen am Neckar wastewater treatment plant

Design of the micropollutant removal stage:

AC = activated carbon
RI = rated inflow

Year of commissioning of the advanced treatment stage				2018
Maximum treatable flow rate [L/s]				700
Contact reactor		Sedimentation basin		
▪ Number of basins	2 * 3	▪ Total volume	[m³]	5,100
▪ Volume per basin	[m³] 210	▪ Total surface area	[m²]	1,257
▪ Total volume	[m³] 2 * 630	▪ Min. retention time for RI	[h]	2.0
▪ Min. retention time for RI	[min] 30	▪ Max. surface load rate for RI	[m/h]	2.0
▪ Typical PAC dosage	[mg/l] 5 - 8			
Filter				
▪ Configuration	Cloth filter	▪ Total filter area	[m²]	300
▪ Material	OptiFiber pile cloth	▪ Max. inflow filter	[l/s]	700
▪ Number of filter cells	4	▪ Max. filter velocity	[m/h]	8,4