

Removal of micropollutants in the Freiberg am Neckar wastewater treatment plant

Specification of the plant:

Treatment capacity	[PE]	25,500
Load	[PE]	19,000
Inflow volumes:		
▪ Dry weather flow	[l/s]	100
▪ Max. wet weather flow	[l/s]	300
▪ Annual wastewater volume	[m³/a]	850,000



Process technology:

Mechanical treatment	Fine screen, sand and grease trap, primary clarifier
Biological treatment	Pre-denitrification, nitrification, 2 lanes
Chemical treatment	Phosphate precipitation: simultaneous and post
Elimination of micropollutants	Granulated activated carbon filter (Conti-GAC)
Filter	Cloth filter



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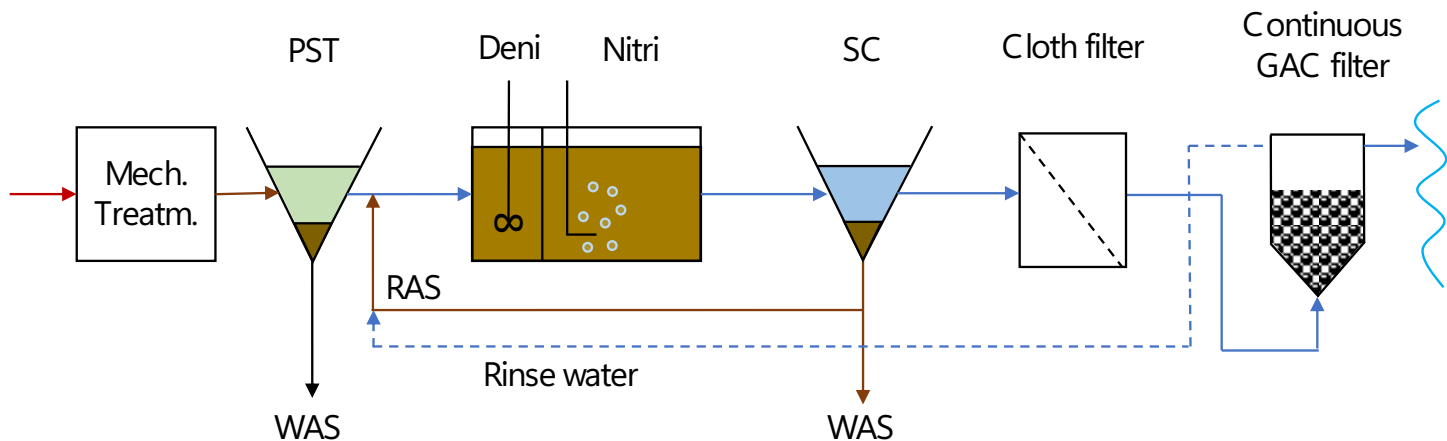


Fig 1: Process diagram of the Freiberg am Neckar wastewater treatment plant

Design of micropollutant removal:

Year of commissioning of the advanced treatment stage	2024
Activated carbon filter	
▪ Max. treatable volume flow	[l/s] 100
▪ Number of filter cells	8
▪ Surface area of filter cells	[m²] 5
▪ Volume of filter cells	[m³] 20
▪ Volume of the activated carbon bed per cell	[m³] 15
▪ Surface area of the activated carbon bed per cell	[m²] 5
▪ Max. filter velocity	[m/h] 9
▪ Min. empty bed contact time (EBCT)	[min] 20