

Demonstrating integrated innovative technologies for an optimal and safe closed water cycle in Mediterranean tourist facilities www.demeaumed.eu

SMART AIR MBR

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Description

Smart Air MBR® is the only product on the market that effectively **reduces the energy costs associated** with **MBR air-scour** according to the online monitoring of permeability

Advantages

- **Savings up to 35% of membrane aeration cost**
- Reliable **control of membrane fouling**
- Extension of membrane life
- Adaptation to any membrane configuration
- No effect on the biological nutrient removal

Target pollutants

- Suspended solids and biodegradable organic matter
- Nitrogen content (ammonia and/or nitrate/nitrite)
- Biodegradable organic micropollutants (14 PhACs and 13 EDCs)
- Microbiological charge

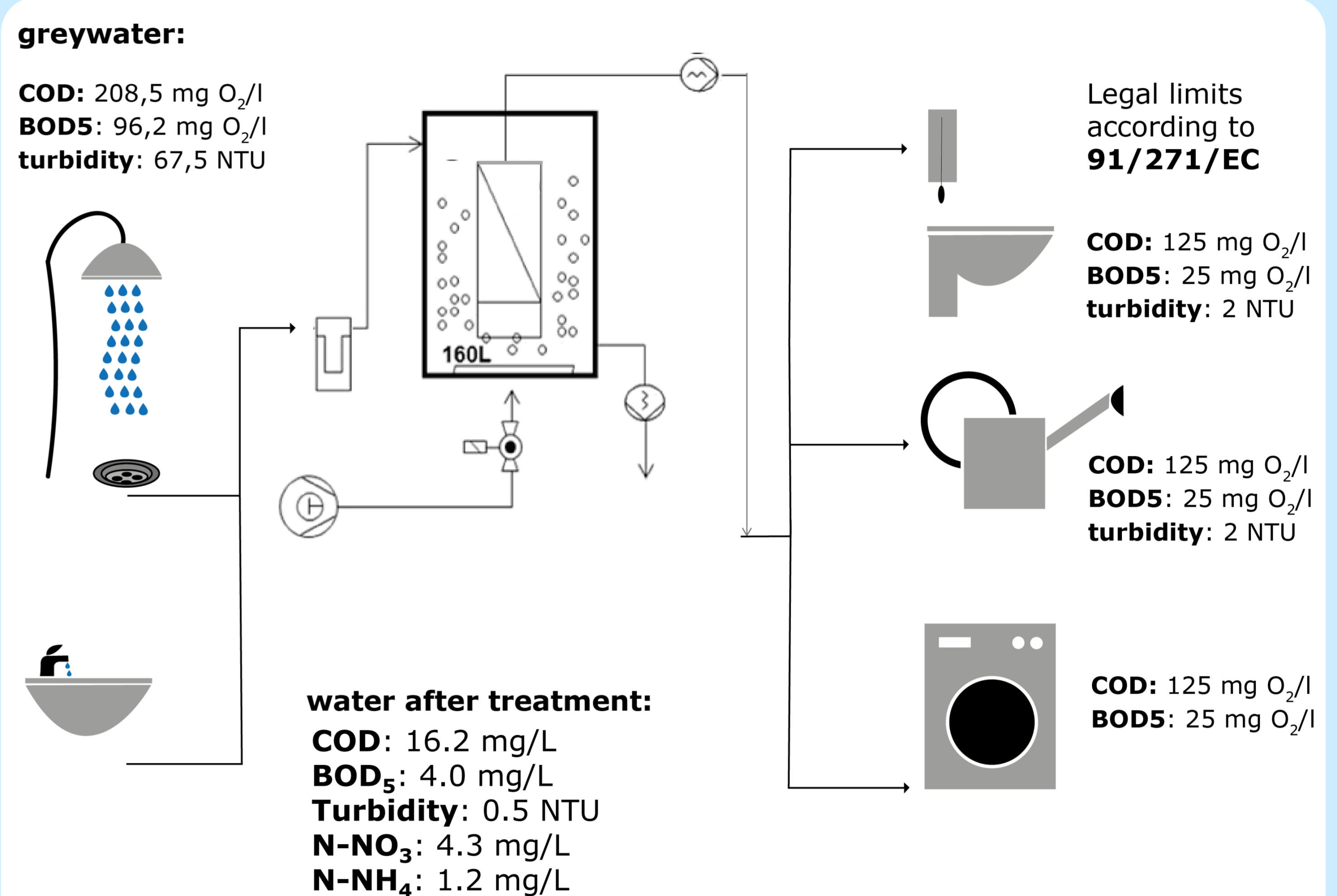
Applicability

- **Greywater**: e.g. shower and laundry
- **Black** and **wastewater** (domestic and industrial)



Results from demEAUmed

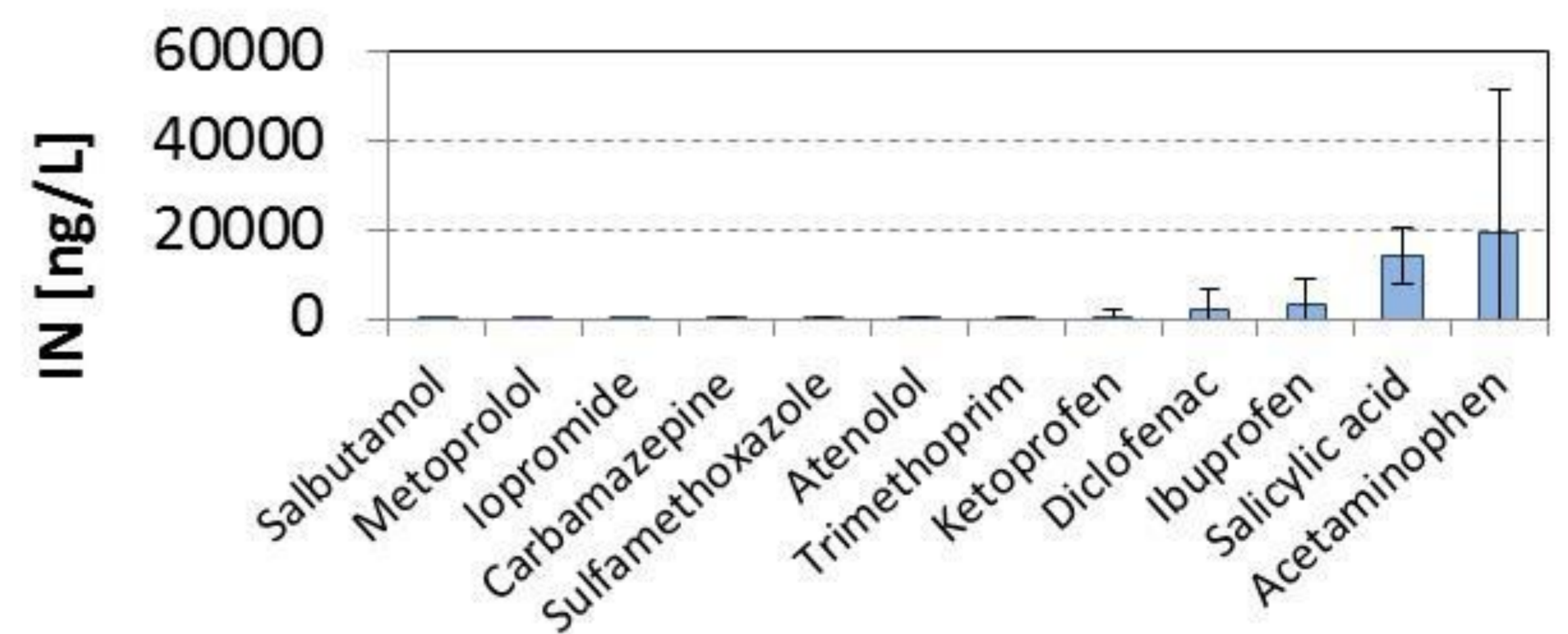
- MBR based greywater reuse systems are **feasible alternative for hotels**
- On average **35.2% energy consumption reduction** of the air scour in the greywater treating MBR



- 96.0%, 89.9%, 93.4%, 89.1% of TSS, COD, BOD₅ and N-NH₄ removal, respectively
- Pathogen removal between 3 and 5 logs

Focus on micropollutants

- Extreme **variability of micropollutants in greywater** during high and low touristic seasons



- High efficiency **removal for several micropollutants**

