

Data underlying the publication: " Recovery of microbial biomass and purification performance after scraping of full-scale slow sand filters"

Authors

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General introduction

Two full-scale slow sand filters Dunea drinking water treatment plant in the Netherlands was monitored for a period of four months by sampling water from different depths and sand from the top layer during operation. One filter is examined after scraping of the *Schmutzdecke*, while the second filter functions as a control without scraping. In the sampled water, parameters such as microbial biomass determined by cellular ATP and Intact cell counts, dissolved organic carbon, ammonium and nitrate were measured. In the sampled sand, active biomass was determined using cellular ATP and intact cell counts, and total biomass was estimated using qPCR.

A detailed description of the filter design and sampling location has been provided in the manuscript titled: " Recovery of microbial biomass and purification performance after scraping of full-scale slow sand filters"

Data description

The excel file includes description of various chemical and microbiological parameters measured in water and sand.

Data file format

Database

The database file provided a tabulated overview of the test data. The database file consists of four tabs. The data content of each tab is described below.

Filter characteristics: This tab provides characteristics of both control and scraped filters and influent for both filters

Microbial biomass in water: This tab provides data on the depth profiles of cellular ATP and Intact cell counts in water in both scraped and control filters over time

Biomass on sand: This tab provides data on the active biomass concentration (cATP and ICC) in the top layer sand of both scraped and control filters over time

Total biomass qPCR: This tab provides data on the total biomass concentration measured by qPCR in the top layer of both scraped and control filters over time and in the filter influents and effluents

Dissolved organic carbon: This tab provides depth profiles of Dissolved organic carbon in both scraped and control filters over time

Ammonium: This tab provides depth profiles of Ammonium in both scraped and control filters over time

Nitrate: This tab provides depth profiles of Ammonium in both scraped and control filters over time

Overview of data columns

Column name	Unit	Explanation
Temperature	°C	Experiment temperature
ATP	pg/ml or pg/g sand	Concentration of adenosine triphosphate (ATP) in water and sand
ICC	Cells/ml or cells/g sand	Concentration of intact cell counts (ICC) in water and sand
DOC	mg C/L	Concentration of dissolved organic carbon
Ammonium	mg N/L	Concentration of ammonium in the influent
Nitrate	mg N/L	Concentration of ammonium in the influent
Scraped filter	-	Data from scraped full-scale filter
Unscraped filter	-	Data from unscraped full-scale filter