

Apparatus comprising trace element dosage and method for treating raw water in biofilter - DTU Orbit (08/11/2017)

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Apparatus for treating raw water in a biofilter The present invention relates to an apparatus in which raw water is treated through microbial activity where microbial activity is controlled by nutrients and other parameters. Some of the nutrients controlling the microbial activity are trace elements such as certain metals (Cu, Co, Cr, Mo, Ni, W, Zn or a mixture thereof). The apparatus comprising - a volume provided with an inlet (2) for raw water and an outlet (3) for water having been subjected to microbial activity, a filter and a trace element dosage device (13) are placed in this volume: - the filter comprises a filter material (4) including a porous filter material and a microbial biomass, the filter material is either stationary relative to the volume or comprises a particulate material, the filter material (4) is inserted in a fluid flow path generated by water flowing in direction from the inlet (2) to the outlet (3) or in the reverse direction, - the trace element dosage device (13) is positioned upstream of the porous filter material and microbial biomass and is configured to dose trace element(s) to the water flowing through the filter. A method for treating raw water by microbial activity whereby trace elements are dosed upstream of the filter is also claimed.

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