

Title (en)

MOBILE DEVICE FOR BIOLOGICAL TREATMENT OF BIOREACTOR-TYPE WASTEWATER

Title (de)

MOBILE VORRICHTUNG ZUR BIOLOGISCHEN BEHANDLUNG VON BIOREAKTORABWASSER

Title (fr)

DISPOSITIF MOBILE DE TRAITEMENT BIOLOGIQUE DES EAUX USÉES DU TYPE À BIORÉACTEUR

Publication

EP 3237339 A1 20171101 (FR)

Application

EP 15832814 A 20151221

Priority

- FR 1463287 A 20141223
- FR 2015053696 W 20151221

Abstract (en)

[origin: WO2016102872A1] Mobile device for biological treatment of bioreactor-type wastewater with a submerged membrane enabling treatment of greywater and blackwater, having an inlet duct (36) for effluent to be treated and an outlet duct (8) for treated and filtered water connected to a permeate pump. Said device is characterised in that it comprises a container, the interior volume of which is between 50 L and 300 L, and has a parallelepiped appearance with two large vertical lateral sides, forming a reservoir (1) in which the concentration of bacteria varies between 3 g/L and 30 g/L, divided into N columns ($2 \leq N \leq 3$) delimited by N-1 intermediate vertical separation walls (4, 4') each provided with an upper passage (13, 13') and a lower passage (14, 14') between columns (2, 2', 3) enabling circulation of effluent between the columns (2, 2', 3), a membrane filter (5) comprising an assembly of parallel, planar filtration membranes (8) also with a vertical appearance, presenting a membrane surface area of between 1 m² and 12 m², being located in the upper portion of one of said columns (3), the central column if N=3, under the upper passage(s) (13, 13'), the membranes (6) being connected to a downstream collector (7) collecting the filtered water and connected to the outlet duct (8), the permeate pump ensuring a transmembrane flow less than the subcritical flow, at least one diffuser (11, 11', 12) of fine air bubbles being located at the base of each column (2, 3), each diffuser (11, 11', 12) being connected to a regulating solenoid valve and to pumping means ensuring therein an airflow greater than or equal to 10 Nm³/h per diffuser.

IPC 8 full level

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