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(54) Title: METHOD FOR BIOLOGICAL PURIFICATION OF WATER

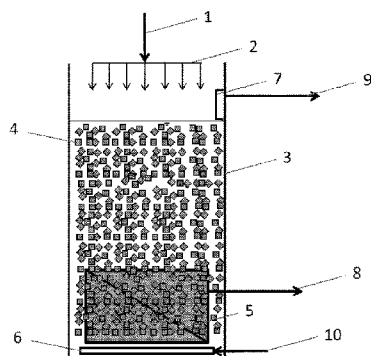


FIG. 1A

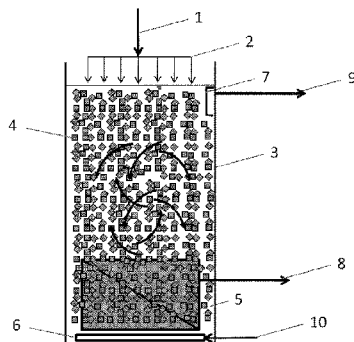


FIG. 1B

(57) Abstract: It is described a method for biological purification of water, the method comprising: leading the water into a reactor through one or more inlet pipes or inlet zones; leading the water and substrate through carrier elements for biofilm growth which have a high protected surface area ($>200 \text{ m}^2/\text{m}^3$ carrier elements) and a large pore volume ($>60\%$); wherein one or more membrane units are submerged in the water in the reactor; wherein permeate is pulled out of the reactor through the pores of the membranes; wherein oxygen-containing gas is supplied in the reactor through an aeration system; wherein during normal operation the water level in the reactor is maintained below one or more outlet pipes or outlet zones that are dedicated for excess sludge removal; wherein during washing operation strong turbulence is created for removal of excess sludge as the water level in the reactor is temporarily raised to the level where the outlet pipes or outlet zones that are dedicated for excess sludge removal are.



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