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(54) Title: METHOD AND APPARATUS FOR USE IN THE TREATMENT OF WATER

(57) Abstract: There is disclosed a method of treating wastewater, comprising the steps of: (i) culturing a first and/or a second and/or a third microbe population in a first, a second, and a third vessel, respectively, the first microbe population being capable of bioaccumulating at least one pollutant, the second microbe population being capable of producing a high level of Extracellular Polymeric Substances (EPS) and/or being capable of entrapment of at least one pollutant, and the third microbe population being capable of surface adsorption of at least one pollutant; (ii) dividing the cultured first and/or second and/or third microbe populations into a first portion and at least a second portion, respectively, wherein each respective at least second portion is capable of regenerating the respective microbe population; (iii) contacting a main stream of wastewater comprising at least one pollutant with the first portion of the first and/or second and/or third microbe populations, such that the first portion of the first and/or second and/or third microbe population removes at least part of the at least one pollutant from the wastewater; and (iv) removing at least part of the first portion of the first and/or second and/or third microbe populations from the main stream of wastewater.

