Method for water treatment by adsorption and filtration on a granular material bed

1. Field of the invention

The invention pertains to the field of the treatment of water.

More specifically, the invention pertains to a method for treating water in order to reduce its content in organic matter as well as its content in micropollutants. Such micropollutants can especially be constituted by pesticides, endocrine disruptors, residues of medicines or residues of industrial products.

The method according to the invention forms part of the context of methods for treating water implementing a granular material enabling the retention of the organic matter and micropollutants that it contains.

The method that is the object of the invention can be applied especially in the fields of water potabilization, the tertiary treatment of wastewater and the treatment of industrial wastewater with a view to its discharge it into the natural environment or its re-utilization.

2. Prior art

There are various known prior-art methods of water treatment that use a granular material to retain the organic matter and, as the case may be, the micropollutants contained in water or in an effluent.

Thus, the most basic techniques implement filtration on a simple sand bed. When such a bed is clogged, the filtration must be stopped in order to wash it, generally by sending treated water in a counter flow (this is the backwashing process).

Other techniques using sand in more complex devices enable the sand to be cleansed while the filter is being used, without interrupting the filtration process.

Thus, there is a method known from the patent application FR2342769A