A method and apparatus for the onsite treatment and disinfection of concentrated blackwater

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Value Proposition

Over two billion people globally do not have access to safe, affordable sanitation, with many living in parts of the developing world that lack the required infrastructure to provide centralized water purification. The inventors' novel method to improve upon existing limitations of electrochemical blackwater purification provides the basis of an onsite, water treatment system that can be implemented in remote locations to improve local public health and overall economic output.

Technology

The current invention provides a novel method for treating blackwater in areas lacking conventional purification infrastructure. Their novel set-up results in a practical, energy-efficient, long lasting system for standalone onsite waste water disinfection that can be employed in areas of the developing world that have few safe sanitation options. Preliminary data shows that implementation of the inventor's purification method lowers both carbon oxygen demand and total suspended solids to acceptable ISO 30500 discharge standards while maintaining an energy efficient electrochemical wastewater treatment cycle.

Advantages

- Specific filtration steps lower the energy required to achieve suitable disinfection levels of blackwater
- An energy efficient electrochemical purification system that prolongs the lifetime of components required for wastewater treatment
- Lower oxidative contact times improve overall service lifetime of the apparatus

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