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(57) Abstract :

This invention provides a low-cost solution for the removal of iron from drinking water, designed specifically for rural and household use. The community-level system uses natural aeration and locally sourced river sand for filtration, while the household system incorporates an air pump and various low-cost filter elements. Adsorption using biochar made from waste fruit peels is used for enhanced iron removal. The invention is simple, low-maintenance, and environmentally friendly, making it ideal for regions with limited resources.

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