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Patent Search

Invention Title	REMOVAL OF ARSENIC FROM GROUND WATER BY CAPSULE TECHNIQUE.
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Abstract:

The delivery of the chemical needed for removal of Arsenic from the contaminated water can be done in specific sequence as required by using three capsules cases one inside the other. The first capsule (outer one) contains 500mg of NaHCO₃, the second one (middle one) contains 2 drops of 5% Kmno₄ adsorbed in neutral chalk powder and the last one (innermost one) contains 0.5 ml of 25% FeCl₃ also adsorbed in neutral chalk powder. The capsules can be used for treating 5 liters of water. Three sizes of capsules were used, outer one capacity 700mg, middle one capacity 200 mg and inner one capacity 100 mg

Complete Specification

Claims: We claim that:

The encapsulated technique of removal of arsenic will be a very reliable technique for delivery of the required chemicals for arsenic removal from ground water. This will simply require adding of required quantities of capsules as per amount of water that's need to be processed for arsenic removal. The capsule can be supplied by government agencies in rural areas or they can be bought from open market. This will create entrepreneurs for production of capsules for removal of arsenic from water. This easy technique will help for arsenic removal as an unskilled person can use it.

Preparation of the capsules

The dissolving time of the capsules were determined by putting empty cases of the capsules in distilled water.

Arsenic from ground water can be removed using NaHCO₃ (0.1 milligram per litre), 5% Kmno₄ (0.5 milligram per litre) , and 25% FeCl₃.(25 milligram per litre)

The delivery of the chemical needed for removal of Arsenic from the contaminated water is done in specific sequence as required by using three capsules cases one inside the other. The first capsule (outer one) contains 500mg of NaHCO₃(C1), the second one (middle one C2) contains 2 drops of 5% Kmno₄ adsorbed in neutral chalk powder and the last one (innermost one C3) contains 0.5 ml of 25% FeCl₃ also adsorbed in neutral chalk powder. The capsules were used for treating 5 liters of water. Three sizes of capsules were used, outer one capacity 700mg, middle one capacity 200 mg and inner one capacity 100 mg.

The capsules as specified above is sufficient for 5 litre of arsenic contaminated water number and size of the capsules can be modified as per requirement of the user.

The process of Arsenic removal in contaminated ground water.

At the mild alkaline pH conditioned by sodium bicarbonate, ferric chloride coagulate and settle down. The coagulation of Iron, being positively charged as ferric chloride is

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