

REMOVAL OF ARSENIC

DURING THE TREATMENT OF DRINKING WATER

The problem

The groundwater or drinking water in many areas of our Earth is polluted with arsenic.

Medical studies have shown that the long-term consumption of arsenic-containing water leads to changes in the skin

(hyperkeratoses) and, in the worst case, carcinomas. For this reason, the World Health Organisation (WHO) has recommended a limit of 10 µg of arsenic per litre of drinking water.

With conventional plant technology, the cost of achieving this limit is particularly high and thus cost-intensive.

The solution

Our special adsorbing agent, FerroSorp® Plus, can provide a solution. FerroSorp® Plus has iron hydroxide-containing granules which can be used to remove arsenites and arsenates from water. The first stage is the adsorption of arsenic to the surface of FerroSorp®. The second is a reaction which results in the formation of a stable iron arsenate. Phosphates, heavy metals and hydrogen sulphide are adsorbed by FerroSorp® Plus.



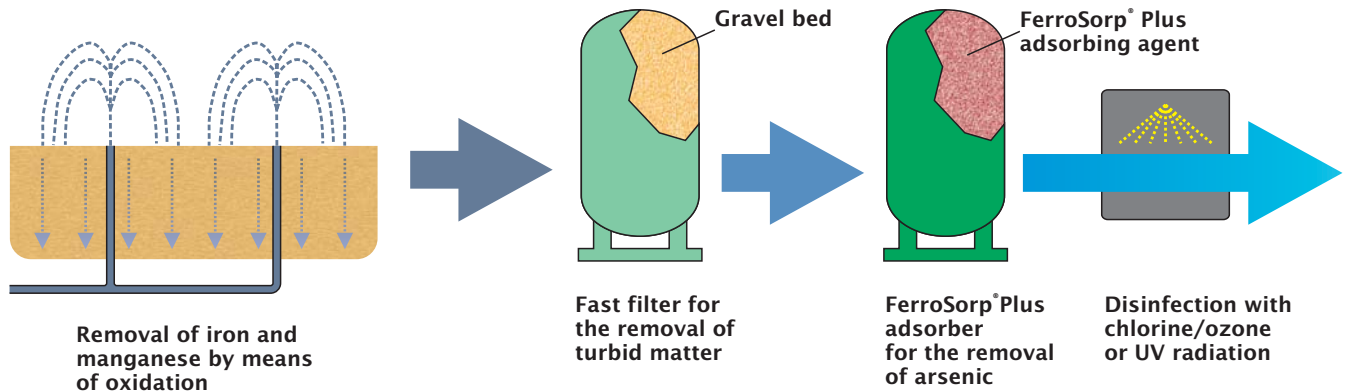
Domestic water supply with a FerroSorp® Plus filter

HERBST UMWELT-TECHNIK GmbH supplies both small filters for fountain water purification as well as drinking water treatment plants.

Our FerroSorp® Plus filter offers a high level of purification with low purchase and operating costs. Because of its small size, the filter can be fitted into any existing plant.

SUMMARY

Diagrammatic representation of a drinking water treatment plant with the removal of arsenic



Uses and benefits

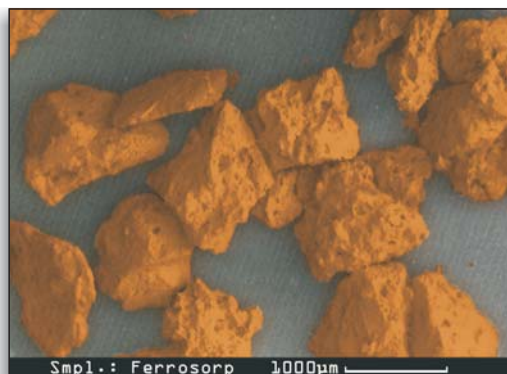
Where can FerroSorp® Plus be used?

- Separation of arsenic compounds when treating drinking water
Purification of rainwater, e.g. in soil retention filters
- The binding of phosphates in water sanitation
- Treatment of community groundwater in contamination land sanitation
- Further phosphate elimination in purification plants

- The binding of nutrients in aquaria, fish farms and garden ponds
- Purification of industrial waste water which is contaminated with heavy metals.

A summary of the benefits

- A high level of purification at a low cost
- High loading rates through a very porous surface
- Simple technology
- Low operating costs



Particles of FerroSorp® under an electron-scanning microscope