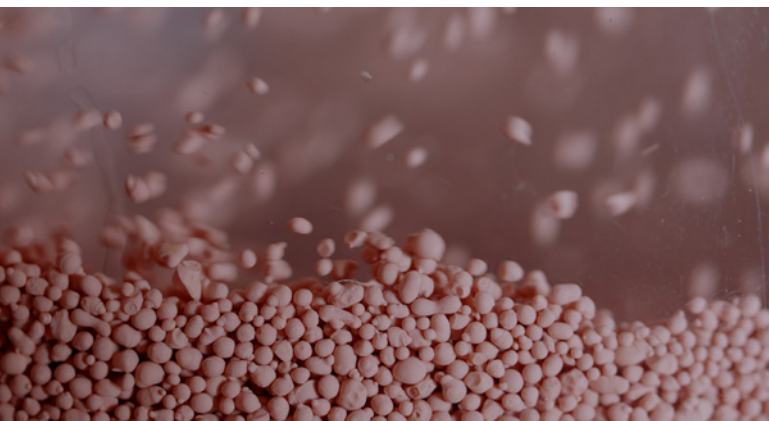


AsMET

Arsenic removal adsorbent technology



We offer a new, cost-effective, sustainable, and economic water treatment technology over conventional and chemical-intensive arsenic mitigation methods, it is called AsMET. AsMET is a cerium-based regenerable adsorber that can be used to remove arsenic contamination from drinking and industrial water. Regenerable means that as the adsorbent reaches its capacity limit, the media goes through a simple regeneration wash-off process and is ready to be used again for up to 10 years.



FIELDS OF APPLICATION

- for water utility companies and for water industry companies
- for agriculture, animal husbandry, vegetables, fruits, and food growing and processing industries, etc.

THE ASMET ADSORBENT

- adsorbs the arsenic (III) and the arsenic (V) content of the raw water
- however high the arsenic content of raw water ensures that it is below the WHO limit
- expected life span is 7–10 years
- can be used up to 50 °C water temperature
- regeneration is performed with commercial chemicals, expected frequency of the regeneration is varied from the raw water As content
- the system operates without added chemicals
- the material always has to be kept under the water

ADVANTAGES OF THE PRODUCT

- cerium based adsorber resin – flexible use for all users from domestic use to waterworks and all the other water industry players
- can be attached to existing waterworks, or installed newly with suspended solid pre-filter
- lifetime 7–10 years
- regenerable, allowing for smaller filters and lower running costs and leaving a smaller environmental footprint
- taste, smell, and mineral content of the water stays the same
- ensure the supply of stable arsenic free water quality with cost-saving long-term operation

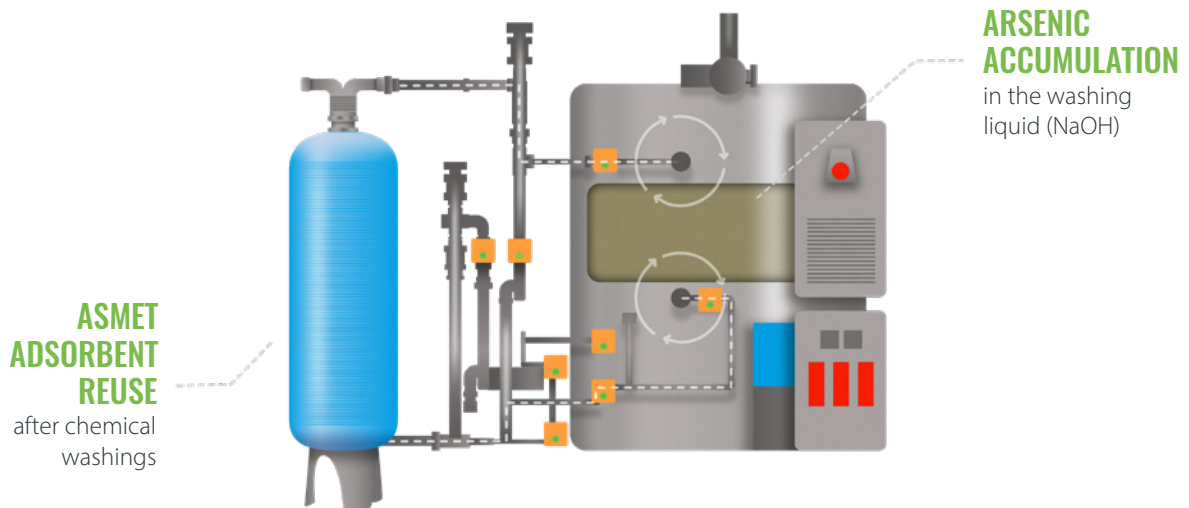
TECHNICAL CONDITIONS

- the material could be piled up to 1.1 meters under water
- the system always uses two tanks of adsorbent in series for the continuous treatment of water, also during regeneration
- required adsorbent quantity can be calculated from the peak capacity of the waterworks (m³/hour)
- 1-liter adsorbent can clean 10 liter/hour of water flow
- under 20 mg/l of arsenic content, we can use partial flow treatment

PARTIAL FLOW TREATMENT

The AsMET adsorbent purifies the water under 1 µg/liter of arsenic level. If the arsenic level in the raw water is low, it is possible to use partial flow treatment to reach the WHO regulation (10 µg /liter). It is possible to set the required arsenic content of the treated water. With this process, we can operate the system at a lower cost.

REGENERATION WASH-OFF PROCESS



Regenerable adsorbent-based drinking water purification – an environmentally friendly, sustainable, cost-effective solution for providing arsenic-free, healthy drinking water.

AsMET arsenic removal adsorber

Characteristic	arsenic adsorption capacity (g/l-Ad)	1.1–1.5g/l
	specific gravity	1.4
	average particle diameter	0.7 mm
Conditions of use	initial setting	not necessary
	pH	5.8–8.6
	operating temperature	50°C max.
	contaminants that affect adsorption efficiency	oxidizing / reducing agents, PO ₄ ³⁻ , B(OH) ⁴⁻ , F ⁻ , HCO ₃ ³⁻ , SiO ₂
Conditions of regeneration	NaOH, NaOCl, HCl	