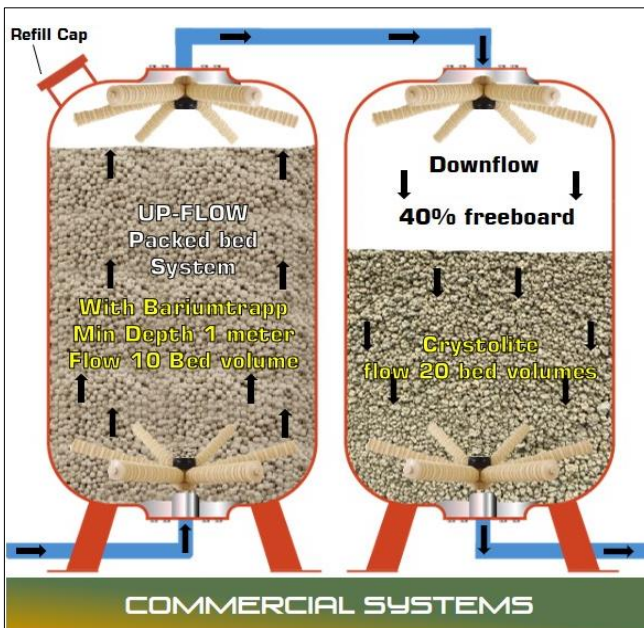


ORIGIN: NATURAL DOLOMITE STONE

BARIUM TRAPP

BARIUM ADSORBENT

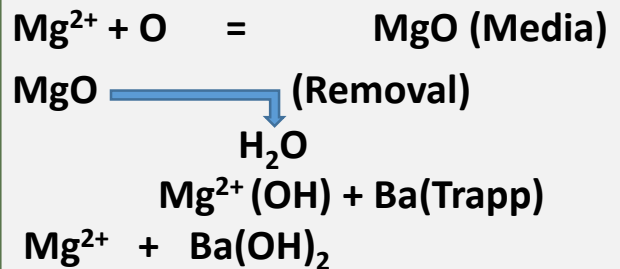


Advantages

- No Control Valves
- No Backwash
- No Waste Water
- No Chemicals
- No Regeneration
- No Concentrate
- High Filtration Rate
- Filtration down to 1 micron
- Resistance to Heavy metals
- Continuous operation & performance
- Easy Maintenance

The above process shown is for removing soluble **Barium (Ba)** in water by adsorption onto the **Hydrous Manganese Oxide Beads**. In addition this process will also **remove Silica, Phosphates, Sulphates and Strontium from water**. The negatively charged Hydrous manganese oxide beads in **Up Flow** packed bed system when comes in contact with water having Barium than immediately Barium is adsorbed onto Hydroxide making it **non-dissolvable** and then later trapped by **Crytolite filtration**. The other methods to reduce Barium concentration are just not economical and dangerous for environment.

Mechanism



Ion Exchange Method

However, strong acid cation system can remove barium from water with **massive unintended consequences**. Ion exchange systems require frequent resin regeneration using **Sodium Chloride**. The treatment, handling and disposed of the Regenerant (chemicals) are a major drawback to this lousy technology and concentrating to the world problems.

Reverse Osmosis Method

As the world says, concentrated wastes with membranes are not reversible. Reverse Osmosis systems, scaling often occurs on the **RO membrane** if the barium reacts with contaminants which form Barium silicate, Barium phosphate and Barium sulfate or Barium carbonate. This reduces the efficiency of the Reverse Osmosis units and damage the **Membranes**.

So there is only one Unique method to remove Barium from water is **Bariumtrapp** which involves adsorption of Barium onto Magnesium (Mg^{2+}) Hydroxide (OH^-). Adsorption is pH dependent process. The water must have once again a pH of approximately 10.5 for efficient Barium Adsorption. **Bariumtrapp systems** are cost effective and most successful.