

Which water filter can remove styrene in water?

These are water filtration models that can remove styrene in water that every family should choose to protect the health of the whole family.

Styrene is a substance harmful to human health. Therefore, the reduction of styrene concentration in water is still the lowest concern of experts as well as the people. In an experiment held at Hanoi University of Technology, it was found that some current water purifiers can remove styrene. So which type of water filter is it? Join us to find out!

content

1. How does high styrene water affect health?
2. Which water filter can remove styrene?
 1. Activated carbon water filter - an effective styrene removal solution
3. The best styrene removal water filter available today

How does high styrene water affect health?

What is styrene? Styrene is a harmful organic compound, exists in liquid, volatile, insoluble or sparingly soluble in water, has a slightly sweet taste, and smells like gasoline. This compound is around us, such as water, air, soil, cigarette smoke, automobile exhaust, motorbikes, food, etc.

Because styrene is toxic, it is on the list of 109 criteria for evaluating clean water quality according to the Ministry of Health's National Technical Regulation on Food Quality (QCVN 01: 2009 / BYT). The styrene limit is 20 µg / liter of water. Therefore, water with styrene concentration exceeding the permitted standard from 1.3 to 3.65 times is not used for eating and drinking.

According to the World Health Organization, the daily tolerable level for styrene is 7.7µg / kg body / day. Exposure above this level will be detrimental to health. Many studies in humans and animals show that too high styrene content can affect the respiratory system, digestive system, nervous system with symptoms such as headache, dizziness, nausea, . Long-term exposure to styrene at high levels also causes damage to the reproductive system, even cell metabolism, causing cancer.



High styrene water has many health effects

Which water filter can remove styrene?

Activated carbon water filter - an effective styrene removal solution

On the afternoon of October 19, 2019, at the laboratory of the Institute of Chemical Engineering, Hanoi University of Science and Technology, Dr. Doan Van Tuan (Department of Environment, Yonsei University, Korea) and the Institute's staff Tested styrene filter capacity of some Kangaroo water filters. The test procedure takes place as follows:

1. Using specialized equipment to create water samples with styrene concentrations 10 times higher than the permitted standards for daily-life water of the Ministry of Health.
2. Run the machines continuously and measure at different filtration levels from 20 to 100 liters of water output.
3. Using two instruments of Research Institute of Chemical Engineering to measure styrene concentration in water samples: UV Spectrophotometer (UV-Vis) device and Gas Chromatography Mass Spectrum (GC / MS).

Results : High styrene water samples after being filtered by some Kangaroo water filters did not detect styrene existence.

According to Dr. Doan Van Tuan, Kangaroo water purifier has a structure of three layers of protection: coarse filtration, fine filtration and ultrafiltration combined with mineral refining.

1. The first protective layer has 3 filtration steps, in which the activated carbon filtration step is capable of absorbing all dissolved organic substances, including styrene molecules.
2. The second layer of protection is the RO filter (reverse osmosis), which helps filter plant protection residues, antibiotic residues, salts of heavy metals, bacteria, water-soluble organic substances.

3. The final layer is a fine activated carbon PostCarbon activated carbon structure, which can remove trace organic substances if left in the water.

Thanks to this 3-layer structure, the selected Kangaroo water filters can remove styrene. This is really good news for us because of the increasingly polluted water, especially after the clean water of the Da River water plant was contaminated with oil, causing styrene levels to exceed the permitted level.

The best styrene removal water filter available today

2 of the typical Kangaroo water purifier models capable of styrene filter used in Dr. Doan Van Tuan's experiments include the Kangaroo KG100HA 9-core RO water purifier and Kangaroo KG109A RO water purifier.

Kangaroo KG100HA Hydrogen 9 core RO water purifier

Kangaroo KG100HA water purifier is designed with compact, modern design and luxurious black and white tones. Products using RO Vortex filtration technology help reduce 75% of wastewater, increase 69% of pure water and increase filter life. Machine disconnection using self-sealing mechanism to help reduce water leakage, slip pipes. Hydrogen generation and mineral regeneration mechanisms help replenish neutralized hydrogen content and absorb free radicals. The automatic deep suction pump makes the water purifier work well even in the situation of weak inlet water supply. Water intake hose is made of stainless steel, ensuring safety for users' health. **Reference price: VND 6,290,000.**



Kangaroo KG100HA Hydrogen 9 core RO water purifier

Kangaroo KG109A RO 9-core water filter

Luxurious and modern, these are the first impressions of many Kangaroo KG109A water purifiers. The body of the device is made from powder coated steel sheet, tempered glass against oxidation. Kangaroo KG109A is equipped with 9 filter elements, helping to remove many bacteria, impurities and harmful chemicals for health. The machine can filter water sources such as rain water, well water, river water, alum-contaminated water, etc. A 10-liter water tank can meet the needs of a large family. **Reference selling price: VND 4,790,000.**



Kangaroo KG109A RO 9-core water filter

Which water filter can filter styrene? Hope you have the answer for yourself. Wishing you and your family always use clean, hygienic and especially styrene free!

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