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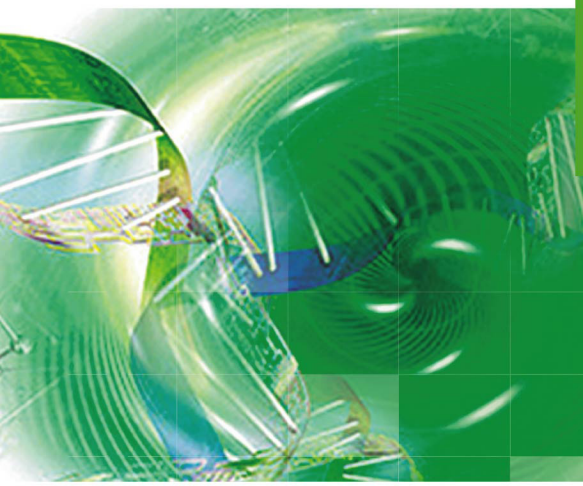
AccuSEPA™ CNT-Ag Coated Virus Filter

A Rapid Water Filtration Cartridge for the Separation and Removal of Viral Particles



- **Carbon Nanotube (CNT) Silver Composite Matrix (70% by weight)**
- **Designed specifically to separate and remove water-borne viral particles**
- **Fast, specific and low-cost filtering**
- **High-quality, high-efficiency virus removal**

Product Descriptions

- **AccuSEPA™** is specifically designed for the high-efficiency removal of viral particles from drinking water.
- The CNT-Ag material allows for a very small pore size (~10 nm), which is suitable for filtration schemes such as water-borne virus removal, preparation of virus culture media, filtration and purification of biological fluids, filtration of protein and enzyme solutions and other aqueous solutions.
- Filtrate, including viral particles and other macromolecules accumulated by the **AccuSEPA™** filter are retained via physical mechanism.
- **AccuSEPA™** filters over 99.99% of 28 nm polio virus, giving it an Absolute rating of 0.02 microns.
- **AccuSEPA™** is optimized for aqueous solutions at pH 6 ~ 8.

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Product Features

- Mean pore size is less than 0.025 um.
- Suitable for removal and separation of water-borne viruses
- Fast, accurate and low-cost removal and separation
- High-quality, high-efficiency virus removal

Product Applications

- Virus removal from drinking water
- Separation and recovery of viruses from aqueous solutions
- Secondary filter for capturing viruses, bacteria and organic material
- Purification of beverage solutions
- Deployable in a biochemical filter scheme for protection against malicious water supply contamination

CNT-Ag Membrane for Water Purification

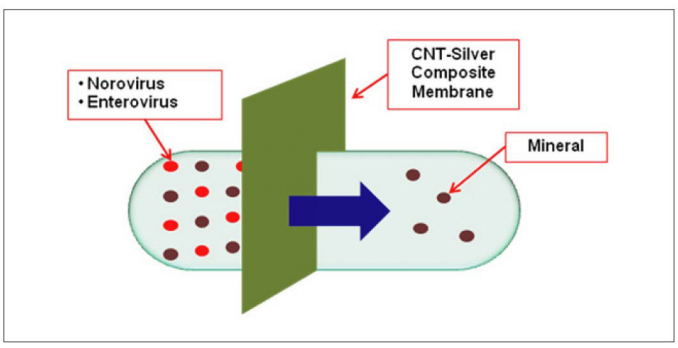

Figure 1. CNT-Ag Membrane filters Norovirus and Enterovirus from contaminated water, but mineral components are passing over the membrane.

FE-SEM Image of CNT-Ag Composite Material

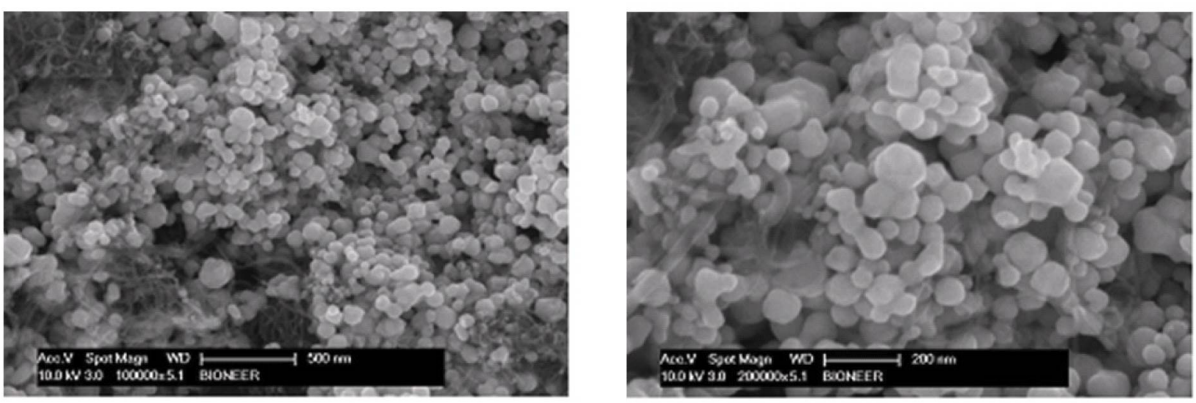

Figure 2. FE-SEM images of CNT-Ag composite material used in AccuSEPA™ . Yield of synthesis is 70% (by weight). Silver particles are deposited onto CNT strands uniformly.

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Flow Rate Comparison

The surface of the **AccuSEPA**™ filter is treated with a proprietary process to improve flow rate.The treatment yields an increase in flow rate of up to 50% compared to non-treated filter material.

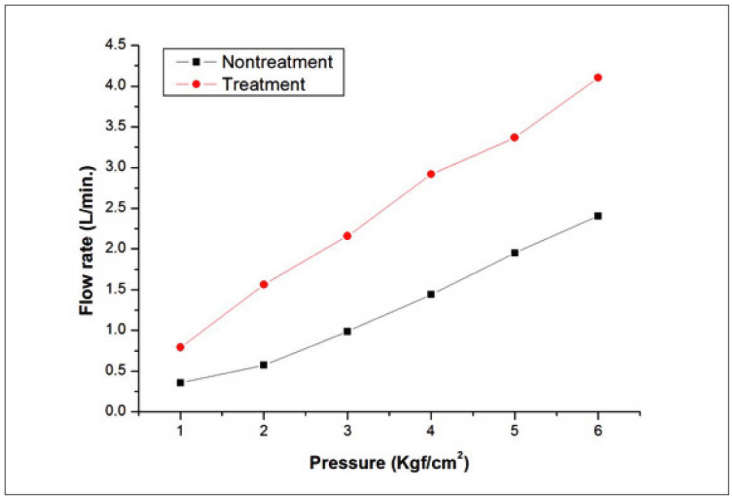

Figure 3. Flow rate comparison of AccuSEPA™ with and without treatment.

Virus Removal Test

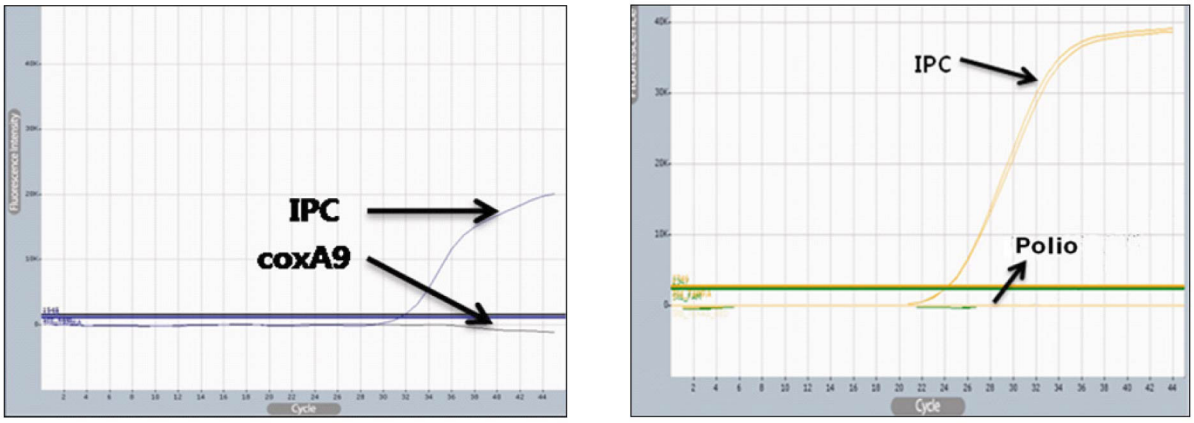

Figure 4. Results of Coxsackie and Polio virus removal test. The average size of Coxsackie virus is 30nm and Polio virus is 28 nm. Filtered water through the AccuSEPA™ was analyzed by real-time PCR.

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Ordering Information

Please inquiry for bulk orders.

Cat. No.	Product Descriptions	Pack size	List Price ($)
AccuSEPA™ :			
TF-1010-1	CNT-Ag Coated Virus Removal Filter cartridge	1 ea	US$ 135
TF-1010-2	CNT-Ag Coated Virus Removal Filter cartridge	10 ea	US$ 945
TF-1010-3	CNT-Ag Coated Virus Removal Filter cartridge	50 ea	US$ 4,250

Legal Disclaimer

'*AccuSEPA*™ virus removal filter development technology' is covered under Korea patent application 10-2009-0026356, 10-2010-0005932 and its corresponding international patent application

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