



**A.S. FILTRATION™**  
THE CLEAR CHOICE

# PathShield™ Antimicrobial Filter

VS  
OTHER TECHNOLOGIES

## INTRODUCTION

In the ever-evolving landscape of water purification and microbial pathogen control, the choice of filtration technology is crucial. This paper aims to evaluate the effectiveness and advantages of PathShield Antimicrobial Filter Media for non-potable water applications, compared to four other commonly used water treatment methods: KDF-55, AFM (Activated Filter Media), Ultraviolet (UV) treatment, and Reverse Osmosis (RO). To assist you in making an informed choice, each method is compared to PathShield on its ability to remove or inactivate pathogens, cost-effectiveness, environmental impact, and ease of maintenance.



PathShield Antimicrobial Filter Media is an innovative technology designed to provide superior protection against microbial contaminants in water, including bacteria, viruses, and protozoa. It employs a

combination of physical filtration and antimicrobial additives to ensure safe and clean water. It is stable, non-toxic, and non-corrosive.

## EFFECTIVENESS AGAINST MICROBIAL PATHOGENS

- **PathShield Antimicrobial Filter Media:** PathShield has proven highly effective at removing a wide range of microbial pathogens, achieving up to *99.99% removal rates*. Its combination of mechanical filtration and antimicrobial agents offers robust protection against waterborne diseases.
- **KDF-55:** Primarily targets heavy metals and chlorine, making it less effective against microbial pathogens.
- **Activated Filter Media (AFM®):** While AFM can improve filtration efficiency and reduce maintenance, it does not offer the same level of antimicrobial protection as PathShield..
- **Ultraviolet (UV) Treatment:** UV treatment is effective at disinfecting water by inactivating microorganisms, but it does not remove particulate matter or chemical contaminants.
- **Reverse Osmosis (RO):** RO is highly effective at removing a wide range of contaminants, including microbial pathogens, but it is energy-intensive and wastes a significant amount of water during the filtration process.

## ENVIRONMENTAL IMPACT

- **PathShield Antimicrobial Filter Media:** PathShield is an eco-friendly option that does not produce wastewater during filtration, reducing its environmental impact.
- **KDF-55:** Is environmentally friendly but does not address microbial pathogens adequately.
- **AFM:** Known for its sustainability and low environmental impact, but it may not provide the same level of microbial protection.
- **UV Treatment:** Does not introduce chemicals into the water, making it environmentally friendly.
- **RO:** Wastes a significant amount of water, about one out of every four gallons, during the filtration process, making them less environmentally friendly.

## EASE OF MAINTENANCE

- **PathShield Antimicrobial Filter Media:** PathShield requires minimal maintenance, typically involving periodic replacement or regeneration of the media.
- **KDF-55:** Relatively low maintenance but may require additional filtration methods for pathogen control.
- **AFM:** Easy to maintain but may need more frequent replacement.
- **UV Treatment:** Requires regular bulb replacement and periodic cleaning to maintain effectiveness.
- **RO:** Demands regular membrane replacement and can be complex to maintain.



PathShield can help you meet your TMDL compliance for stormwater containing bacteria.

## THE BOTTOM LINE

PathShield Antimicrobial Filter Media stands out as a highly effective, cost-efficient, environmentally friendly, and easy-to-maintain option for microbial pathogen control in water treatment. While other methods may excel in specific areas, such as heavy metal removal or energy efficiency, PathShield offers a well-rounded solution that prioritizes water safety and quality.

When considering a water treatment technology, PathShield is the top choice for those seeking comprehensive microbial protection without compromising on sustainability and cost-effectiveness.

**About us** | A.S. Filtration was born from a small group of environmental engineers and scientists sharing the same ideal — to provide high performance and cost-effective water treatment solutions to all who need it.



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