

Comparative Ostomy Filter Performance: Hollister AF300 Filter versus ConvaTec SUR-FIT Natura Filter

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Introduction

An ideal ostomy pouch filter will provide high air flow to prevent ballooning, while also preventing leakage of odorous gases and liquids. This paper describes how the **AF300** Filter, a Hollister technology, satisfies these ideals and compares its performance to the ConvaTec SUR-FIT Natura two-piece products with filter.

The combination of advanced materials and leading-edge technological design in the AF300 Filter meets the needs of customers by creating a product with enhanced air flow, superior gas deodorizing capabilities, and internal and external liquid protection.

Air Flow Properties

Gases entering the pouch through the stoma can expand the size of the pouch, similar to blowing up a balloon. Pouch ballooning becomes a problem when the pouch is easily visible underneath clothing.

The AF300 Filter uses an advanced membrane material, a GORE™ Medical Membrane. This membrane, along with the design of the filter, allows for efficient air flow through the filter.

Although the air flow rate of the AF300 Filter is lower than that of the ConvaTec SUR-FIT Natura filter in laboratory tests, the membrane of the AF300 Filter helps lead to enhanced liquid protection.

Deodorizing Capacity

Ostomy pouch odors arise from both flatus gases and any fecal matter contained in the pouch. The two main components that lead to foul smells are Hydrogen Sulfide (HS) and Methyl Mercaptan (MM). Hydrogen Sulfide smells like rotten eggs, while Methyl Mercaptan smells like rotting cabbage.

In laboratory tests, the Hollister AF300 Filter deodorized the gases for a longer time, on average, than the ConvaTec SUR-FIT Natura filter. The activated carbon in the AF300 Filter is treated with a special additive that traps these sulfur-based odor compounds, giving it a higher deodorization capacity. Additionally, the AF300 Filter uses a special design to make the best use of the activated carbon in the filter package.

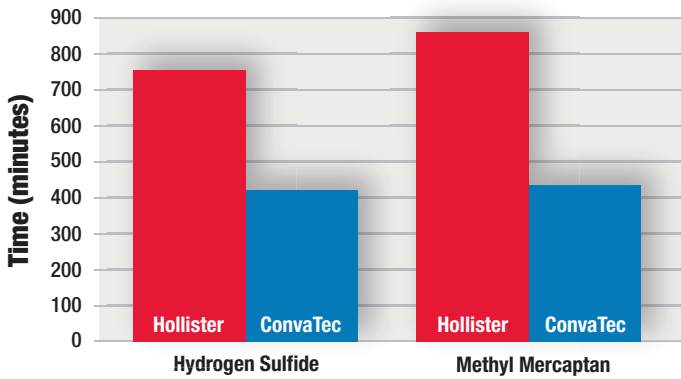
The filters were tested following a modified version of the British Standard Institute Ostomy Collection Bags, part 101, Appendix H: “Method for determining efficiency of filter.” These tests were verified by an outside laboratory.

The figure on the back of this page shows a comparison between the deodorization capacities for the ConvaTec SUR-FIT Natura filter and the AF300 Filter. The results are shown for both Hydrogen Sulfide (HS) and Methyl Mercaptan (MM) for each filter.



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Gas Deodorizing Capacity



Liquid Protection

The filter must be porous enough for gases to readily flow through it, but also needs to prevent liquids from passing through. As previously stated, the AF300 Filter uses a GORE™ Medical Membrane, which has properties particularly well suited to allow free flow of gases while restricting the flow of liquids.

A feature that is unique to the AF300 Filter is a second protective membrane on the outer surface of the filter.

This membrane is designed to prevent water from entering and clogging the filter while the user is bathing or engaged in water activity. This eliminates the need to apply a sticker or tape to the outside of the pouch, which is required with the ConvaTec SUR-FIT Natura two-piece products with filter.

Conclusions

The Hollister AF300 Filter helps reduce pouch ballooning, deodorizes gases, and provides internal and external liquid protection eliminating the need for filter covers. This is accomplished through a unique filter construction from Hollister which helps provide the proper balance of air flow through the filter, better odor control through the use of a patented design and activated carbon, and a specially designed film barrier that keeps liquid from penetrating the filter from the inside or outside.

The relationship between the identified needs of our customers and the material and design choices made in the development of the AF300 Filter are shown in the table below.

Customer Need	Materials and Design Choices to Meet This Need
Reduce pouch ballooning	<ul style="list-style-type: none"> • GORE™ Medical Membrane with high air flow properties • Effective surface area for more air flow
Prevent odors	<ul style="list-style-type: none"> • Activated carbon with special additive treatment • Controlled air flow path to make efficient use of activated carbon
Prevent leakage of fluids through the filter	<ul style="list-style-type: none"> • GORE™ Medical Membrane with hydrophobic/oleophobic surface repels fluids • Dual membranes help prevent fluids entering the filter from inside or outside the pouch
Function automatically without user intervention	<ul style="list-style-type: none"> • External membrane eliminates the need for filter covers during water activities • Filter is integrated into pouch—no additional steps are required



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