

## **Contamination Control Apparel Considerations for the Food Processing Industry – Food Quality Magazine – December 2003 Issue**

***Fabrics can be more than a barrier between street clothing and your product:  
They can be an important part of your contamination control program.***

Of the many potential sources of contamination in a food processing environment, none is more persistent, pervasive or pernicious than the human beings working there.

One of the most significant methods for reducing human contamination in any food manufacturing environment is to provide your employees with clean, sanitized work apparel. With recent USDA and FDA regulatory changes, especially in RTE meat facilities, cleanroom uniforms provide added protection. For decades, manufacturers in pharmaceuticals, medical devices, and biotechnology industries have relied on cleanroom uniforms to provide a protective barrier between their employees and their product.

Cleanroom apparel is designed to capture and entrain particles by not allowing contaminants to be dispersed into the processing environment. Cleanroom fabrics are characterized by numerous attributes, some of which are explained below:

- The weight of the fabric determines its strength and durability; however a lighter fabric contributes to operator comfort.
- The pore size is an indicator of barrier efficiency. The smaller the pore size, the more particles that will be entrained.
- The Moisture Vapor Transmission Rate evaluates the ability to move moisture through the fabric and translates to more comfort to the operator. Moisture build-up causes the operator to feel hot due to the increase in humidity between the fabric and the body.
- Air permeability is the ability of a fabric to allow air to pass through it. Air flow in heating and cooling processes, such as the cooling process of the body, contains contaminants which can be transferred to the product. The lower the permeability or transfer of air from within the garment to the outside, the lower the contamination to the product.

Integrity 1800™ is one of the leading fabrics used in cleanroom apparel. The Integrity 1800™ fabric is treated with Teflon® HR for fluid repellency. It is also treated with the AEGIS Microbe Shield™, a durable, non-leaching, non-migrating, washable antimicrobial compound designed to address the microbial concerns of the food processing industry. The AEGIS Microbe Shield™ technology controls microorganisms on direct contact and does not create an environment which encourages mutation or adaptation.

### ***Precision Uniform Cleaning***

When choosing a uniform program provider, consider the importance of that provider's ability to safeguard your garments from cross-contamination, maintain a constant level of aesthetic, microbial, and particulate cleanliness, and deliver uniforms in a timely and efficient manner. A state-of-the-art uniform program provider will offer:

- Garment segregation to prevent cross-contamination
- A wash process specially formulated to address decontamination and particle removal
- A wash chemical formula that removes macroscopic soils
- Extensive, documented testing and validation processes, and machinery
- An efficient, thorough, one-pass, HEPA-filtered distribution process
- A complete inspection process
- A garment packaging process that maintain cleanliness
- A distribution service that provides the required quantities of garments on a regularly-scheduled delivery.



An inclusive garment service program within a controlled environment will enhance your current risk management based HAACP objectives and ensures that your product is protected from human contamination.

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