



## Case Study

### Optimizing Hot Oil Filtration for a Leading Snack Food Producer

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#### Needs Assessment & Solutions Summary

Filpaco partnered with a leading producer of snack foods specializing in trail mixes, nut-based snacks, and related products to optimize their hot oil filtration system. This critical project involved transitioning the client's central filtering unit back to an automatic indexing filtration system equipped with Filpaco's FDA-certified rayon media.

The advanced filtration solution significantly improved oil quality, enhanced operator safety, reduced downtime, and delivered cost savings. By leveraging Filpaco's superior filtration properties and industry expertise, the solution addressed critical safety, efficiency, and quality challenges in the client's nut frying production process.

#### Project Specifications

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- ⚙️ **Client:** Leading snack food producer specializing in nut-based snacks
- ⚙️ **Application:** Hot oil filtration for frying nuts in mass production
- ⚙️ **Key Challenges:**
  - ✓ Addressing safety concerns caused by manual filter bag changes in high-temperature conditions
  - ✓ Improving oil quality and filtration efficiency
  - ✓ Reducing downtime and maintenance demands
- ⚙️ **Certifications:** FDA compliance for food-grade materials







## Solution Design

### Customized Filtration Solution:

-  **Automatic Indexing Filtration System:** The solution incorporated Filpaco's rayon media into the client's automatic indexing central filtration unit, replacing inefficient bag filter vessels.
-  **Media Optimization:** Filpaco's FDA-certified rayon filter media was tailored for high heat resistance, fine particulate capture, and durability, ensuring exceptional filtration efficiency.
-  **Safety Enhancements:** Automated operation reduced the need for manual handling of hot oil, significantly mitigating risks to operator safety.

## Applications & Capacity

### Primary Applications:

-  **Hot Oil Filtration:** Essential for maintaining product quality, extending oil life, and ensuring consistent frying performance in high-capacity production.
-  **Mass Nut Frying:** Efficient filtration supports high-volume production while reducing waste and operational inefficiencies.

### Capacity:

-  The solution supports filtration for up to 2,500 liters of hot oil per hour, ensuring continuous operation in demanding manufacturing environments.

## Potential Industries



### SNACK FOOD MANUFACTURING

Filtration for fryers used in producing chips, nuts, and other snacks.



### FAST FOOD CHAINS

High-capacity fryer filtration to maintain oil quality and reduce operating costs.



### MEDICAL DEVICE PRODUCTION

Ensuring compliance with health regulations and enhancing production efficiency.



### Manufacturing Details

#### MATERIAL SELECTION:

##### Filpaco FDA-Certified Rayon Media:

This media was chosen for its high heat resistance and ability to capture fine particles, ensuring consistent oil clarity and extended frying oil life.



#### PRODUCTION PROCESS:

**Die Cutting:** Media was precision die-cut to match the client's filtration unit specifications, ensuring seamless integration and optimal performance.

**Customization:** Rolls were produced in 36-inch widths, with custom lengths to meet the client's operational requirements.



#### PACKAGING:

Rolls were delivered in palletized quantities, ensuring easy handling and efficient storage.



### Quality Control Measures

#### ➡ Material Testing:

- ✓ Verified compliance with FDA standards for food-grade applications.

#### ➡ Filtration Performance Validation:

- ✓ Ensured effective particulate capture and extended oil life.

#### ➡ Dimensional Accuracy:

- ✓ Inspected die-cut media for precise fit within the filtration unit.

#### ➡ Batch Testing:

- ✓ Conducted to ensure consistent quality and performance across all production rolls.





## Value Delivered

### ➡ Cost Savings:

- ✓ Reduced downtime and material consumption, optimizing production efficiency.
- ✓ Extended oil life, lowering costs associated with oil replacement.

### ➡ Quality Improvements:

- ✓ Enhanced filtration efficiency ensured superior oil clarity and consistent product quality.

### ➡ Safety Enhancements:

- ✓ Automated filtration reduced operator exposure to high-temperature conditions, improving workplace safety.

### ➡ Operational Efficiencies:

- ✓ Transitioning back to the automatic indexing system eliminated frequent maintenance interruptions caused by clogged filter bags.

This project illustrates Filpaco's ability to deliver tailored filtration solutions that address the unique challenges of the food production industry. By leveraging the advanced properties of Filpaco rayon media, we helped a leading snack food producer enhance product quality, improve safety, and achieve operational cost savings.

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## Contact Great Lakes Filters

Need assistance in maximizing manufacturing efficiencies to ensure quality and optimize costs? Call or email us today and one of our skilled team members will lead the way. (800) 521-8565 ~ [info@acmemills.com](mailto:info@acmemills.com)