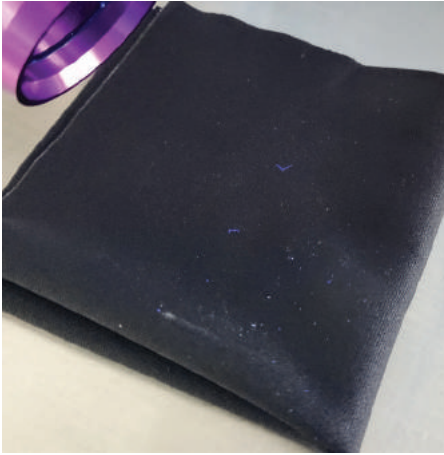




# Inspection & Verification Wipes & Swabs



PolyCHECK® is an ideal cleaning validation and failure analysis tool for particle contamination as it enables quality engineers to rapidly sample equipment surfaces to recover foreign particles in ISO 1-8 Cleanrooms. PolyCHECK® attracts and holds particle contamination on the fabric surface for easy transfer to SEM stubs and analysis via Scanning electron microscopy, x-ray dispersion(SEM/EDX) and Fourier transfer infrared spectroscopy (FTIR).

PolyCHECK® is constructed with cleanroom-grade polyester fabric designed to attract and hold contamination after dry wiping surfaces. The ability to attract and retain particulate contamination from large equipment surfaces allows quality engineers and failure analysis labs to identify and eliminate contamination sources. PolyCHECK® is designed to enable SEM/EDX technicians to quickly transfer collected contamination to SEM stubs for further analysis. PolyCHECK®, combined with Foamtec's material science lab, allows customers to perform risk assessments

for surface contamination on cleanroom work surfaces and process equipment.

The PolyCHECK® Wipe is available gamma-irradiated for investigating non-viable particle levels on equipment in ISO 5 aseptic cleanrooms.

PolyCHECK® is designed with black fabric to ease visual inspections for organic-based particle contamination, which fluoresces when exposed to UV light sources.

## Advantages

- Enables collection of contamination from large surfaces in cleanrooms such as workstations, process equipment, vacuum chambers, robotics, tooling and devices, reducing costly and time-consuming sample collection associated with SEM stubs.
- Allows for much faster failure mode & effect analysis(FMEA) of root cause particle sources to close CAPA's, scratch defect events and particle excursion investigations.
- Allows for proactive, continuous improvement programs to reduce contamination at the source.
- Ideal cleaning validation tool.

## Applications

- Combined with UV light, PolyCHECK enables post-cleaning validation for high vacuum chambers, front end modules, wafer transfer robots, tablet presses, laminar flow hoods and sterile filling machines.
- Ideal for sampling surfaces, tooling and components to identify contamination sources in wafer processing equipment.

Part No.	Description	Size	Units/Case
HT5291K	PolyCHECK® Wipe, Black Polyester Inspection Wipe w/ Sealed Edge, Pack of 50 Wipers per Bag - 24 Bags per Case	9" x 9"	1200
HT5291K-5	PolyCHECK® Wipe, Black Polyester Inspection Wipe w/ Sealed Edge, Pack of 5 Wipers per Bag - 200 Bags per Case	9" x 9"	1000
HT5291KST	Sterile PolyCHECK® Wipe, Black Polyester Inspection Wipe w/ Sealed Edge, Pack of 10 Wipers per Bag - 10 Bags per Case	9" x 9"	100



**Foamtec International**  
720 Venture Dr.  
Waco, TX 76712

**Foamtec International WCC Division**  
**1-760-599-7160**

[www.foamtecintlwcc.com](http://www.foamtecintlwcc.com) | [customerservice@foamtecintlwcc.com](mailto:customerservice@foamtecintlwcc.com)

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# Inspection & Verification Wipes & Swabs



PolyCHECK® Swabs are designed to allow engineers and technicians to validate the cleanliness of critical surfaces. PolyCHECK® Swabs employ a white fabric on one side and a black fabric on the other side in order to give clean room professionals a unique particle detection tool. Ideal when used in conjunction with SEM Analysis.

PolyCHECK® is designed with black fabric to ease visual inspections for organic-based particle contamination, which fluoresces when exposed to UV light sources.

## Advantages

- Eliminates the contamination of critical equipment surfaces that result from the use of SEM stubs or carbon tape.
- Allows for faster particle troubleshooting and investigations.

## Applications

- Ideal for Go/No Go validation checks in vacuum maintenance procedures.
- Excellent risk assessment tool for surface contamination in Semiconductor, Medical Device, FPD and pharmaceutical cleanrooms.

Part No.	Description	Units/Case
HT1501FZW-5	6" Flexible Medium Cylinder Tip, Polyester Over Foam Swab, 5 Swabs per Pack - 100 Packs per Case	500



**Foamtec International**  
720 Venture Dr.  
Waco, TX 76712

**Foamtec International WCC Division**  
**1-760-599-7160**

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# Cleanliness Technical Data

## PolyCHECK® Wipes

Particle Generation via LPC > 0.5 micron	
> 0.3 Micron Particles/m <sup>2</sup>	1500 particles/cm <sup>2</sup>
Ion Count of Extractables (PPM)	
Sulfate	< 0.05
Chloride	< 0.05
Fluoride	< 0.02
Non-Volatile Residue (g/m <sup>2</sup> )	
DI Water	< 0.5
IPA	< 1.5mg/g
Silicone/Amide Free	
Pass	

## PolyCHECK® Swabs

Particle Generation via LPC > 0.5 micron	
> 0.3 Micron Particles/m <sup>2</sup>	< 700 particles/tip
Ion Count of Extractables (Micrograms/Tip)	
Sulfate	< 0.8
Chloride	< 0.9
Fluoride	< 0.02
Non-Volatile Residue (g/m <sup>2</sup> )	
DI Water	< 0.3
IPA	< 1.0

## Absorptive Capacity Data

Basis Weight (g/m )	Absorbency (ml/m )	Absorptive Rate (ml/g)
120	190	3.2



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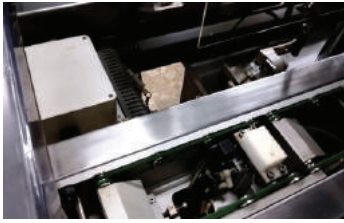
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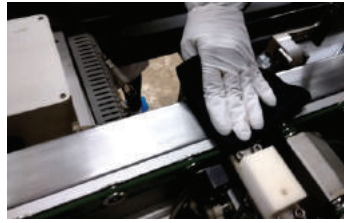
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## How the PolyCHECK® Process Works



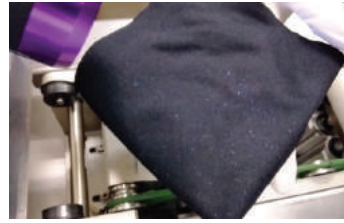
### 1. Choose a Surface to Sample

Under cleanroom lights, light colored fibers and particulates can be difficult to see.



### 2. Wipe the Surface with PolyCHECK®

PolyCHECK® allows both small and large surfaces to be sampled quickly and efficiently.



### 3. Visually Inspect the PolyCHECK® Wipe

PolyCHECK's black fabric allows for operators to pick up fibers and particles that can be hard to see under bright cleanroom lights.



### 4. Use SEM Stub to Transfer Contaminants

Contaminants can easily be transferred from the PolyCHECK® wipe to a single SEM Stub.



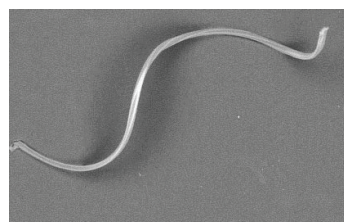
### 5. Run SEM/EDX Testing

A SEM/EDX analysis allows for identification of elements and the characterization of particulates and defects.



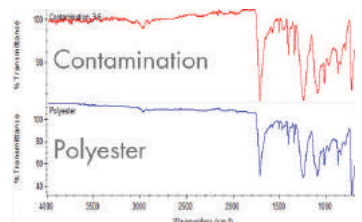
### 6. Run FTIR Testing

PolyCHECK's black fabric allows for operators to pick up fibers and particles that can be hard to see under bright cleanroom lights.



### 7. SEM/EDX Analysis

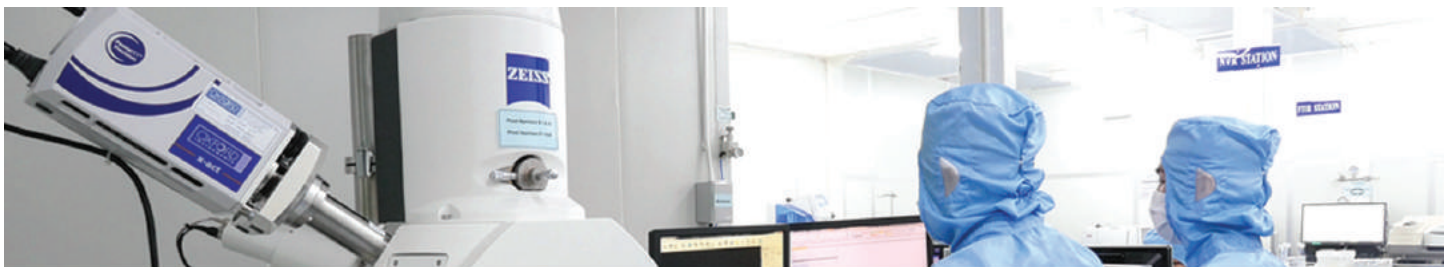
The SEM/EDX machine will allow us to take a look at the chemical composition of the contaminant.



### 8. FTIR Confirms Contamination Source

Comparing and matching two FTIR results allows for a contamination source to be identified. In this scenario, the unknown contaminant's FTIR was matched with a cleanroom polyester wipe's FTIR, confirming the polyester wipe as the contamination source.

## Foamtec's FM Identification and Reduction Program Video



[Click Here to Play Video](#)



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720 Venture Dr.  
Waco, TX 76712

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