

Proper Wiper Folding & Surface Cleaning

A guide to properly fold and use a low-linting wiper for maximum efficiency and effectiveness in a controlled environment.

Recommended Surface Wiping Procedures

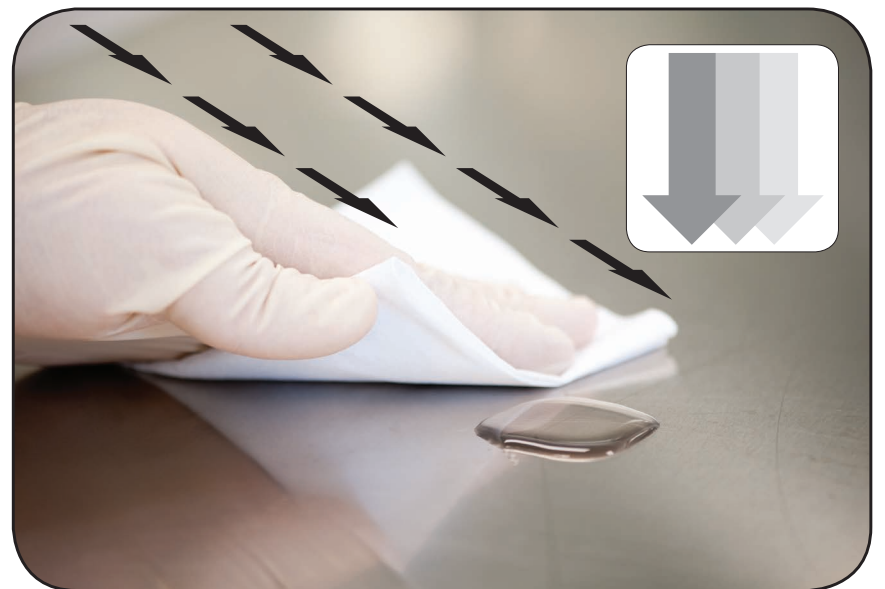
- A.** Prior to entering the cleanroom, follow written SOPs for proper hand hygiene, garment donning, and gloving procedures.
- B.** Disinfect and clean using proper wiping technique.
- C.** Quarter-fold the wiper to get the maximum use out of the wiper and to prevent recontamination. Turn to a new wiper surface after each straight stroke.
- D.** Always wipe using overlapping strokes, in a parallel direction. Use a **new wiper surface** with each linear stroke and always wipe from back to front, **cleanest to dirtiest** and **driest to wettest**.
- E.** Never wipe in a circular motion.



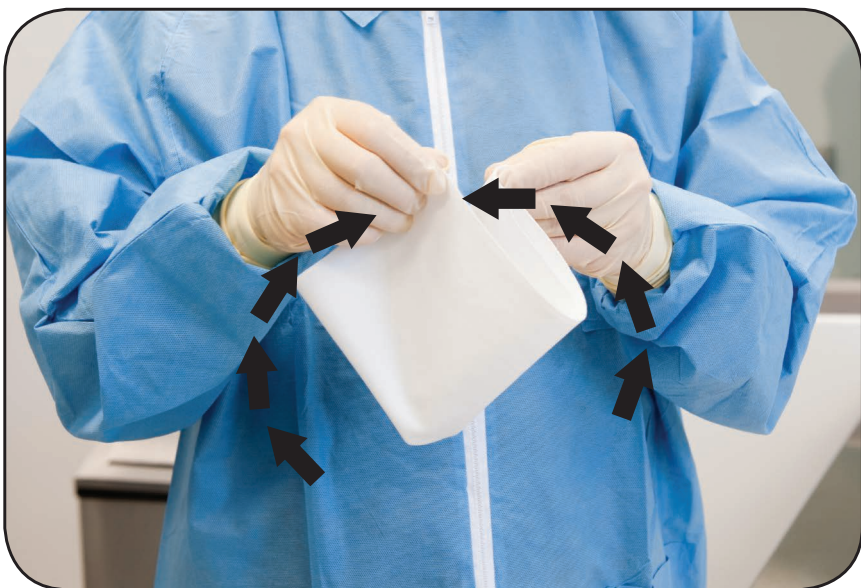
- (1)** Hold the wiper in mid-air. Take the wiper by its edges and fold in half. The wiper should not be placed on any surface during the folding action.



- (2)** Fold the wiper in half again, creating four cleaning faces: two outside and two inside



- (3)** Work from the cleanest areas to the dirtiest areas in long, overlapping unidirectional strokes. Each face of the wiper will be used for one straight stroke. Turn the wiper over and make a second stroke.



- (4)** Refold the wiper as shown in Step 2 to enclose the two contaminated faces and expose the two clean faces. Repeat Step 3 using the two clean faces.



- (5)** Wiper may be completely unfolded, reversed, and refolded beginning again at Step 1 to enclose the four contaminated faces and expose the four remaining clean faces.

Classification numbers (N)	Maximum concentration limits (particles / m ³) for particles equal to and larger than the sizes listed below						Cleanroom Rules:
	0.1 Micron (µm)	0.2 Micron (µm)	0.3 Micron (µm)	0.5 Micron (µm)	1 Micron (µm)	5 Micron (µm)	
ISO 1	10	2					<ul style="list-style-type: none"> • Always follow written SOPs • Remove watches, jewelry, nail polish and cosmetics • Don't eat, chew gum, or drink • Do not sit or lean on any work surface or equipment • Work with calm and slow movements
ISO 2	100	24	10	4			
ISO 3	1,000	237	102	35	8		
ISO 4	10,000	2,370	1,020	352	83		
ISO 5	100,000	23,700	10,200	3,520	832	29	
ISO 6	1,000,000	237,000	102,000	35,200	8,320	293	
ISO 7				352,000	83,200	2,930	
ISO 8				3,520,000	832,000	29,300	
ISO 9				35,200,000	8,320,000	293,000	

Contamination Fundamentals

Sources of Contamination

- Personnel
- Processes
- Objects
- Tools
- Fluids
- Equipment

Invisible and Visible Contamination

- Skin particles
- Fibers
- Dust
- Grease
- Bacteria
- Viruses
- Metals
- Fungi
- Nonvolatile Residues
- Ions

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Americas 800 242 7000
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