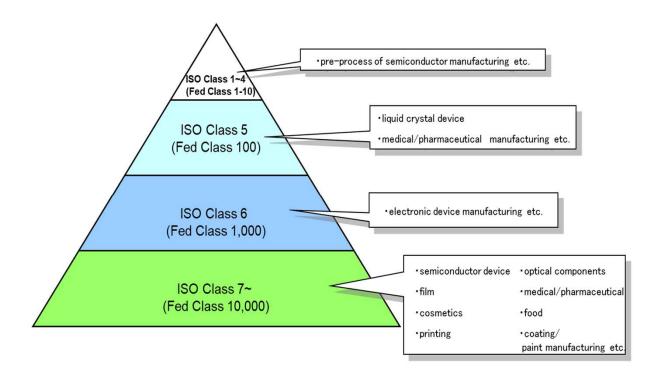
# **Cleanroom Cleaning**

A cleanroom is an enclosed space where strict contamination control is maintained. In other words, the level of aerosol particles and airborne microorganisms in the air is controlled to stay within the limited cleanliness level. There is also required degree of cleanliness maintained for the objects inside the room such as equipment, chemicals, and water supplied to the room. If necessary, environmental conditions like temperature, humidity and pressure are managed carefully as well.

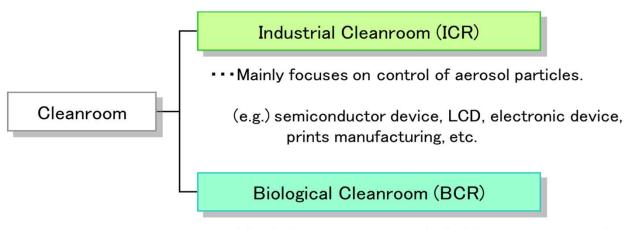
At Sanipro, we offer specialized cleaning services from post-construction total cleanup to daily and periodic cleaning, customized to fit the use and requirement of cleanliness degrees.

## **Classes of Cleanroom Technology**

Cleanroom technology is utilized in various fields.



#### Types of Cleanroom (Intended use)



••• Mainly focuses on control of airborne microorganisms.

(e.g.) medical/pharmaceutical, food, cosmetics manufacturing, genetic engineering, animal experiment facility, operation rooms, etc.

## **Key Purpose of Cleanroom Cleaning**

Particles and dust accumulated on the floor become scattered repeatedly as workers walk.

This type of cleaning is not intended for aesthetics appeal, but for reducing the risk of pollution and contamination of the products, by maintaining cleanliness degree.

### **Types of Cleanroom Cleaning**

#### <Daily Cleaning>

For places where the risk for contamination is high, particularly where personnel movement and activities are active (e.g. changing area, entry/exit area, etc.). To prevent the accumulation and spreading of possible pollution (particles and dust) that could contaminate the cleanroom, it is strongly advised to frequently perform the cleaning.

Target areas: floor, door, pass box, air shower

#### <Periodic Cleaning>

For places where it is difficult to perform daily cleaning, with lower level of contamination risk. The frequency of cleaning should be rather low accordingly. Target areas: wall surface, ceiling surface, ducts/pipes, lighting fixture, etc.

#### <Specialized Cleaning>

Cleaning at contaminated state such as building post-construction or renovation. It is strongly advised to perform gradual cleaning until the cleanliness reaches the acceptable level.

Rough cleaning (removal of coarse particle contamination of particle size exceeding 50  $\mu$ m)  $\rightarrow$  Normal cleaning (removal of particle contamination of particle size 10  $\mu$ m  $\sim$  50  $\mu$ m)  $\rightarrow$  Precision cleaning (removal of residual particle contamination of particle size less than 10  $\mu$ m)

## Cleanroom Cleaning Section & Frequency

Page				Cleaning Details			
Marie Caling				Daily Cleaning			
Marie				Methods	Frequency	Methods	Frequency
1	Sections	Ceiling	Under Ceiling			1 Wet-wiping with clean water	once/3 months
Meta						2 Wiping with cleanroom-only detergent/solvent	once/6 months
Meta						1 Dust removal by cleanroom-only vacuum cleaner	once/12 months
Mail Surface						2 Wet-wiping with clean water	once/12 months
Mail Surface   Mail Surface   Mail Surface   Mail Surface   Mail Mail Mail Mail Mail Mail Mail Mail						3 Wiping with cleanroom-only detergent/solvent	once/12 months
Marie		Wall	Wall Surface		-	1 Wet-wiping with clean water	once/3 months
Page						2 Wiping with cleanroom-only detergent/solvent	once/6 months
Materials   Mat			Joint/Seal Part		-	1 Wet-wiping with clean water	once/3 months
Return 5hift   Retu						2 Wiping with cleanroom-only detergent/solvent	once/6 months
Page			Return Shaft		-	1 Dust removal by cleanroom-only vacuum cleaner	once/3 months
Proof Surface - Flat						2 Wet-wiping with clean water	once/3 months
Page   Floor Surface - Flat   Floor Surface - Floor Surface - Flat   Floor Surface - Floor -						3 Wiping with cleanroom-only detergent/solvent	once/3 months
Figure   F		Floor	Floor Surface - Flat	1 Dust removal by cleanroom-only vacuum cleaner	once/day	1 Dust removal by cleanroom-only vacuum cleaner	once/week
Floor Surface - Punched Grating   1.2 Dust removal by cleanroom-only vacuum cleaner   Once/dev   2 Wet-wiping with clean water   Once/meek				2 Wet-wiping with clean water	once/day	2 Wet-wiping with clean water	once/week
Figure   Floor Surface - Punched Grating   1   2   Wet-wiping with clean water   0.0ce//dey   2   Wet-wiping with clean water   0.0ce//dey   2   Wet-wiping with clean water   0.0ce//month   0.0ce//mo				-	-	3 Wiping with cleanroom-only detergent/solvent	once/month
Underfloor (chamber)				1-1 Dust removal by cleanroom-only vacuum cleaner	once/day	1 Dust removal by cleanroom-only vacuum cleaner	once/week
Underfloor (chamber)				1-2 Wet-wiping with clean water	once/day	2 Wet-wiping with clean water	once/week
Underfloor (chamber)  Page Pass Box  I Wet-wiping with clean water  Once/day  I Dust removal by clean room-only detergent/solvent  Once/week  Once/week  Once/week  I Dust removal by clean room-only detergent/solvent  Once/week  Once/week  Once/week  I Dust removal by clean room-only detergent/solvent  Once/week  Once/week  Once/week  I Dust removal by clean water  Once/week  Once/week  I Dust removal by clean room-only detergent/solvent  Once/week  Once/week  Once/week  I Dust removal by clean room-only detergent/solvent  Once/week  Once/week  Once/week  Once/week  I Dust removal by clean room-only detergent/solvent  Once/week				-	-	3 Wiping with cleanroom-only detergent/solvent	once/month
Pass Box   Door / Window   1 Wet-wiping with clean water   Once/day   1 Wet-wiping with clean water   Once/week			Underfloor (chamber)			1 Dust removal by cleanroom-only vacuum cleaner	once/12 months
Pass Box    Pass Box   1   Wet-wiping with clean water   Once/day   1   Wet-wiping with clean water   Once/week						2 Wet-wiping with clean water	once/12 months
Fee Door / Window  Pass Box  1 Wet-wiping with clean water  Once/day  1 Wet-wiping with clean room-only detergent/solvent  Once/week  Once/week  Once/week  Once/week  Once/week  Once/day  1 Dust removal by clean room-only detergent/solvent  Once/week  O						3 Wiping with cleanroom-only detergent/solvent	once/12 months
Pass Box    Wet-wiping with clean water   Once/week		Openings	Door / Window	1 Wet-wiping with clean water	once/day	1 Wet-wiping with clean water	once/week
Pass Box    Pass Box				-	-	2 Wiping with cleanroom-only detergent/solvent	once/week
Air Shower    Air Shower   Ducts/Pipes   Duc			Pass Box	1 Wet-wiping with clean water	once/day	1 Wet-wiping with clean water	once/week
Air Shower  2 Wet-wiping with clean water once/day 2 Wet-wiping with clean water once/week				-	-	2 Wiping with cleanroom-only detergent/solvent	once/week
Ducts/Pipes  Ducts	Fadity Equipment	Air Shower		Dust removal by cleanroom-only vacuum cleaner	once/day	1 Dust removal by cleanroom-only vacuum cleaner	once/week
Ducts/Pipes 2 Wet-wiping with clean water once/3 months  Exhaust Port 2 Wet-wiping with clean water once/3 months  Exhaust Port 2 Wet-wiping with clean water once/3 months  Uighting Fixture 1 Dust removal by cleanroom-only vacuum cleaner once/3 months  1 Dust removal by cleanroom-only detergent/solvent once/3 months  2 Wet-wiping with clean water once/month  3 Wiping with clean water once/month  4 Wet-wiping with clean water once/3 months  1 Wet-wiping with clean water once/3 months				2 Wet-wiping with clean water	once/day	2 Wet-wiping with clean water	once/week
Ducts/Pipes 2 Wet-wiping with clean water once/3 months    Wet-wiping with clean water				-	-	3 Wiping with cleanroom-only detergent/solvent	once/week
Exhaust Port - Dust removal by cleanroom-only detergent/solvent once/3 months  Exhaust Port - Dust removal by cleanroom-only vacuum cleaner once/month  Wet-wiping with clean water once/month  Wet-wiping with clean water once/3 months  Lighting Fixture - Wet-wiping with clean water once/3 months		Ducts/Pipes				1 Dust removal by cleanroom-only vacuum cleaner	once/3 months
Exhaust Port 2 Wet-wiping with clean water once/month  3 Wiping with clean room-only detergent/solvent once/month  Lighting Fixture				-	-	2 Wet-wiping with clean water	once/3 months
Exhaust Port 2 Wet-wiping with clean water once/month  3 Wiping with clean room-only detergent/solvent once/month  Lighting Fixture						3 Wiping with cleanroom-only detergent/solvent	once/3 months
3 Wiping with clean room-only detergent/solvent once/month  1 Wet-wiping with clean water once/3 months Lighting Fixture -		Exhaust Port		·		1 Dust removal by cleanroom-only vacuum cleaner	once/month
1 Wet-wiping with clean water once/3 months Lighting Fixture -						2 Wet-wiping with clean water	once/month
Lighting Fixture						3 Wiping with cleanroom-only detergent/solvent	once/month
		Lighting Fixture				1 Wet-wiping with clean water	once/3 months
	L		Lighting Fixture	<del>-</del>	-	2 Wiping with cleanroom-only detergent/solvent	once/3 months

Reference material: Japan Air Cleaning Association JACA No.27-1992 Cleanroom cleaning guidelines.