

Aerosol과 공기 청정 기술 요약

Part 1. Introduction of aerosol

- What is aerosol? : A suspension of solid or liquid particles in a gas.
- Aerosols and health
: Aerosol particles smaller than 2.5 μm induce lung disease.
- Air Purifier (or Air Conditioner)
: Aerosols can be removed by air filters in a purifier or an air conditioner.

Part 2. Mechanism of fibrous air filter

- Mechanism of fibrous air filter: Mechanical mechanism
: There are four mechanisms such as gravitational settling, inertial impaction, interception, and diffusion.
- Mechanism of fibrous air filter: Electrostatic mechanism
: Electrostatic force is induced by Coulombic force and image force.
: The electrostatic filter media is highly effective in filtering fine particles, while maintaining low pressure drop.

Part 3. Inactivation of bioaerosol using plasma

- What is bioaerosol?
: Bioaerosols are aerosols of biological origin (Bio + Aerosol).
- What is plasma
: A plasma is a **ionized gas** consisting of a lot of **ions** and **electrons**.
- Mechanism of inactivation

1) Heat (minor role)	2) charged particles (electrons, ions)	3) electric field (minor role)
4) UV photons	5) reactive species	