Air Purifier Using Water for Fine Particle Reduction in School

Kim, Nayoung
Kim, Hyeryeong

Fine particle is tiny material that cannot be seen to people. Its size is less than 2.5? in diameter, but it’s very harmful to our health. In some education school’s air condition, serious level of dust was found. People often use air purifier to reduce fine particle, but Octyl Isothiazoline (OIT), a toxic chemical, is released from air filters which belong to normal air purifiers sold in the market. The fact that air purifiers using water is doing much better job, and produce less pollution, was identified through our experiments. We invented air purifier using water that can purify air more efficiently, harmless and good to solve the dryness at school as well. When the fan on the back side starts working, the contaminated air comes into the filter, and is cleaned first time. Then water at the bottom rises up along the hose, making a water wall, and purify the air second time. This purifier has shown better performance in clear fine particles than normal air purifier, through the experiments. Our purifier also produced less OIT while testing. It can be used to purify fine particles in schools to make their air condition better.

Awards Won: