

How to read an manufacturer provided air purifier's testing report

Manufacturer always provide their machine performance test report, figure or table for user as reference, some of them will provide full test report, but some of them will only state the testing result on their catalogue only, then user can just only believe the catalogue or brand. Despite we may sometimes ask the supplier to provide the test report for study, then how many people know how to read the report?

There are many laboratory and also testing method to test a machine performance, manufacture always invite a laboratory or just in-house test the machine for any parameters that their machine can provide the best result, we're not challenge their result is truth or not, user is not a specialist that can fully understand whole the report details, we just want to remind few points that most of the user may not difficult be understand. Their testing method: which can tell us that the result is obtained under what conditions e.g. the testing period of time, area / chamber size, initial concentration of sample pollutant and have they take the control sample of natural decay for comparison?

1. Testing period of time: Can tell us how long time the machine can purify the pollutants and get the result e.g. 95% need how long time to operate the machine to purify?
2. The size of the testing room / testing chamber: Can tell us the testing is inside a room with how large of volume e.g a normal 100 ft.2 room with 10 ft.(L) x 10 ft.(W) x 10 ft.(H) = 1,000 ft.3 volume, or the test just inside a testing chamber (box) with 3 ft.(L) x 3 ft.(W) x 3 ft.(H) = 27 ft.3 volume. Remember, being of the volume of a room is much larger than a box, so the actual result

from a box may have a big difference with when it test in room again.

3. Initial concentration of sample pollutant: Can tell us the test result is under which pollutants level, which can reference for us that how effective of the air purifier when it in our actual environment with similar pollutant level. Remarks: A machine effective in low pollutant level may not equal to have same result in medium pollutant level.
4. The control sample of natural decay: Which is very important that most of the manufacturer and user may miss that point. The control sample is used for comparison purpose that tell us the result from natural decay of the pollutants under a same environment, then user will know the real air purifier performance e.g. 95% result get form with air purifier and 50% result get from natural decay, that means the air purifier just help us further remove 45% actually. Reference: normally, max. 20% – 30% result get from natural decay, then the air purifier should be consider.

Conclusion: Testing report is always for our reference only, the result from the report not means we may have the same when the air purifier used in our actual conditions and environment.

