



***Multi-Pass Vs. Single-Pass Air Filtration Testing:
Meaningful Assessment of the Impact of HVAC Filters on Indoor Air Quality***

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This presentation is intended to show the masses that, in the air cleaning business – we need better ways to measure the impact on Indoor Air Quality (IAQ). A progress and status report is given highlighting progress that has been made in developing a new, broader scoped test method. A test method capable of assessing the performance of all systems and devices intended to clean the breathing space in the occupied built environment. Emphasis is on the word “ALL”. We begin with briefly highlighting the general ways IAQ is improved conventionally, then focusing on the one aspect that filtration and air cleaning device manufacturers should be interested in. That is - a realistic, meaningful and technically defensible way to quantify the IAQ provided by these systems. We outline the current methodologies used globally and how each has complex and, in many cases fundamentally flawed theory in their genesis. Effort is made to explain the many nuances of currently available single-pass test methods and how that motivated the progress that has been achieved in developing the multi-pass “Chamber Test”. The motivation to propose this protocol is discussed and the fallacy in assuming that filter testing is the same thing as IAQ testing is laid bare. The spirit of the proposals submitted here is intended to draw attention to the problem at hand and to solicit input from all perspectives. Historically, the best ideas and most impactful actions come from well-intended individuals with a passion for the subject matter. The IAQ assessment of breathing air for all of us is no different. Hopefully, this will be the first of many presentations focused on fresh ideas in assessing IAQ in a fair and meaningful way.