

Comparison of the previous testing conducted to validate the air cleaning efficacy and safety of the PlasmaShield device compared with the testing specifications provided in ASHRAE 241-2023

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This report was prepared for:
PlasmaShield

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Key Findings

The validation approaches detailed in the studies and documents provided (see Table 2), demonstrate that the testing conducted to validate the air cleaning effectiveness and safety of the PlasmaShield device align with the fundamental intent of the standard principles for testing provided by ASHRAE 241-2023 (Normative Appendix A Determining air cleaning system effectiveness and safety). This includes testing that was conducted by third-party independent laboratories, experiments that were conducted in triplicate and with the air cleaning system turned on compared with the system turned off. Details are provided below (Table 1). The testing documents (A1-A17) referred to in this report are presented in Table 2.

Safety:

Accordingly, the PlasmaShield air treatment system meets the safety requirements outlined in ASHRAE 241:2023.

Performance:

Based on the ASHRAE 241:2023 standard test methods used to evaluate the air cleaning effectiveness of PlasmaShield against particulate matter and microbial contaminants, PlasmaShield achieves the following performance indicators:

- Particle filtration efficiency: 99.95% for $\geq 0.3\mu\text{m}$ particles (HEPA-level performance).
- Microbial destruction rate: 99.99998% (7 xLog₁₀ reduction for Bacteriophage MS2).