

GPS Air Soft Ionization Substantially Lowers Mold Counts in Dormitories.

GPS Needlepoint Bipolar Ionization (NPBI®) Products are electronic air cleaners noted to neutralize certain airborne pathogens, boost filter performance, and reduce particles in the air. In this recent field evaluation, GPS NPBI technology is proven effective at **lowering mold particles spores in a dormitory to 1% of the count in outdoor air.**[†]

The Case Study

University, college, military, and recreational dormitories often have a combination of mechanically controlled windows for natural ventilation and distributed (PTAC) air conditioning. In this environment, particularly with wet or damp air conditioning coils, mold growth and mold spore circulation is a concern. A regional private college in the southeastern United States approached GPS Air to help mitigate the prevalence of mold spores and lower the potential health risks. The results are clear: a combination of well-maintained HVAC equipment and NPBI lowered airborne mold counts in the dormitories.

In August 2025, airborne mold samples were collected in one dorm room with ionization and an adjacent room without ionization. Following this test, the college added ionization to more dorm rooms. In September, airborne mold testing was performed again.

Mold Test Results

August	Dorm A (Ionization)	Dorm B (No ionization)	Outdoor
Spore Count/m3 <i>vs outdoor count</i>	387 <i>2.9%</i>	9,557 <i>73.4%</i>	13,014
September	Dorm A (Ionization)	Dorm B (Ionization)	Outdoor
Spore Count/m3 <i>vs outdoor count</i>	1,394 <i>1.1%</i>	1,520 <i>1.2%</i>	132,028

The Conclusion

GPS NPBI technology is proven effective at lowering mold particles spores in a dormitory to 1% of the count in outdoor air.

GPS CI-2 units were installed in the dormitory PTAC units for-easy to apply, auto-cleaning ionization in the airflow. The ionizer is out of sight and easily powered by available low voltage. When the PTAC is operating, circulating the air, ionization is being delivered to the space. GPS IDF-2 units were installed in common spaces like lounges and entryways. The ion distribution fan provides ionization and airflow when it is powered - providing air cleaning even when the HVAC system is off.

Design guides and more case studies are at gpsair.com. CI-2 and IDF-2 have no replacement parts and no required maintenance.

[†]Mold samples were collected using air sampling tubes and analyzed by third party laboratories using optical microscopy. Mold counts in the dormitory were compared to outdoor conditions as the "control". Individual results may vary. For detailed test reports, email marketing@gpsair.com