

Ozone

03

While ozone is an important part of our upper atmosphere, it is an air pollutant and lung irritant that can harm us if we breathe it in the lower atmosphere.

Ozone generation is a common problem with some other air purification technologies such as ionizers, electrostatic filters, high-energy germicidal UV light, and other oxidation technologies.

Molekule's PECO Technology Did Not Produce Ozone and Actually Reduced Ozone in the Air

PURPOSE

This study answered two questions about the performance of Molekule's PECO technology relating to ozone:

Is ozone produced during operation?

Can PECO actually reduce ozone concentrations in the air?

SET-UP

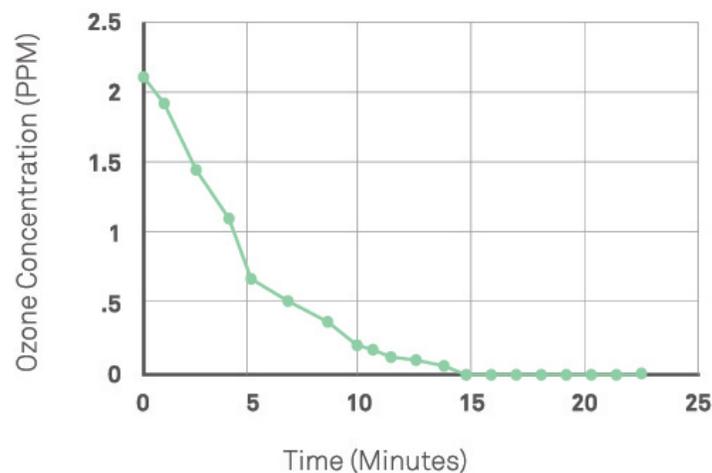
Test 1: A test chamber was injected with artificially high levels of acetone (a common VOC) and Molekule's PECO technology was turned on. Total VOC and ozone concentrations were measured.

Test 2: A test chamber was filled with ozone concentration high enough to be harmful to humans. Molekule's PECO technology was turned on and ozone concentrations were monitored.

RESULT

Test 1: The acetone was reduced to extremely low levels within a few hours, and no production of ozone was detected.

Test 2: Harmful levels of ozone were degraded by the Molekule's PECO technology down to below background levels within 12-18 minutes.



Destruction of Ozone by PECO.



[READ REPORT](#)

University of Minnesota Particle
Calibration Laboratory



Molekule Air Purifier Does Not Produce Ozone According to Official Tests Recognized by the US and Canadian Governments

PURPOSE

This study uses US and Canadian industry standard tests to determine if the Molekule air purifier produces ozone while it is operating. Previous third-party testing showed that Molekule's PECO technology does not produce ozone; this test uses internationally recognized protocols to determine if the Molekule air purifier (as it is sold) produces any ozone while operating.

SET-UP

The test operates a Molekule unit (the same air purifier that's available for purchase) in a chamber and measures ozone concentration. The Molekule unit was operated with the Pre-Filter and Nano-Filter installed for 8 hours on silent, then for 8 hours again on boost mode, and then for 24 hours with no filters installed. An additional test that measured ozone in the outflow from the device was performed, both with and without the Pre-Filter and Nano-Filter installed.

RESULT

The results of all the tests performed showed that no ozone was produced by the Molekule unit. The highest measured ozone concentrations in all tests was 0.002 ppmv, for context 0.080 ppmv is considered background ozone concentration. When the Pre-Filter and Nano-Filter were installed in the device, average ozone concentrations actually decreased, indicating that not only does the Molekule unit produce no ozone, but it actually breaks ozone down.

The results of these tests certify that Molekule's air purifier complies with the federal ozone emissions limit.



[READ REPORT](#)

Intertek

intertek