

# Ozone

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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

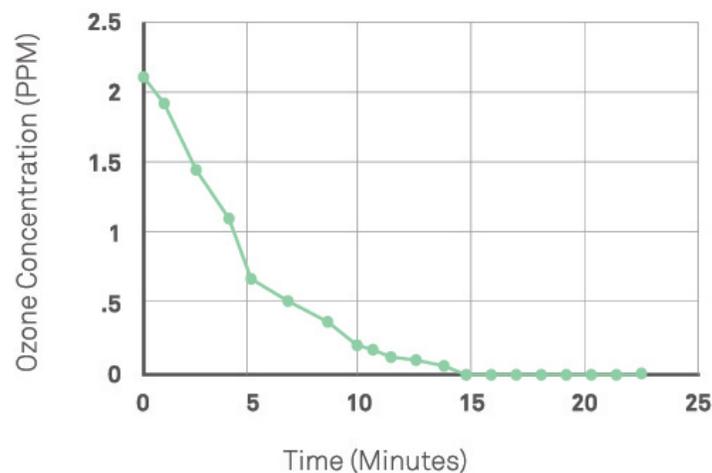
Test 1: A test chamber was injected with artificially high levels of acetone (a common VOC) and Molekule's PECO technology was turned on. Total VOC and ozone concentrations were measured.

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.



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University of Minnesota Particle  
Calibration Laboratory



# Molekule Air Purifiers Do Not Produce Ozone According to Official Tests Recognized by the US and Canadian Governments

## PURPOSE

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These tests use US and Canadian industry standard tests to determine if any of our Molekule air purifier produces ozone while they are 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

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These tests operate Molekule units (the same air purifiers that are available for purchase) in a chamber and measures ozone concentration. Each one was operated with their filters installed for 8 hours.

## RESULT

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The results of all the tests performed showed that no ozone was produced by Molekule units. The ozone concentrations for all tests never rose above 0.080 ppmv, which is considered a normal background ozone concentration. Ozone concentrations appeared decrease while the devices were in operation, 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 California Air Resources Board and the federal ozone emissions limit.



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