In order to exclude any danger to persons when using an OSS ozone generator, the following section looks at the depletion of ozone in motor vehicles.

Aim of the experiment:

It is to be examined whether the ventilation time of 60 minutes after the ozone treatment of a passenger car is sufficient to maintain the specified MAK values for ozone.

The permissible ozone concentration is currently 1 MAK = 0.1 ppm within 8 hours daily.

Test setup and execution:

The tests were carried out with the use of an ozone test chamber. This cabinet has the possibility to measure the ozone produced by the ozone generator and to provide characteristic curves. In addition, the temperature and humidity can be adjusted to simulate various environmental conditions.

Fig. 1: Ozone test chamber

Environmental conditions in the test chamber:
Air humidity: 55.3%
Temperature: 23°C

Test report
ozone depletion

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Test procedure:

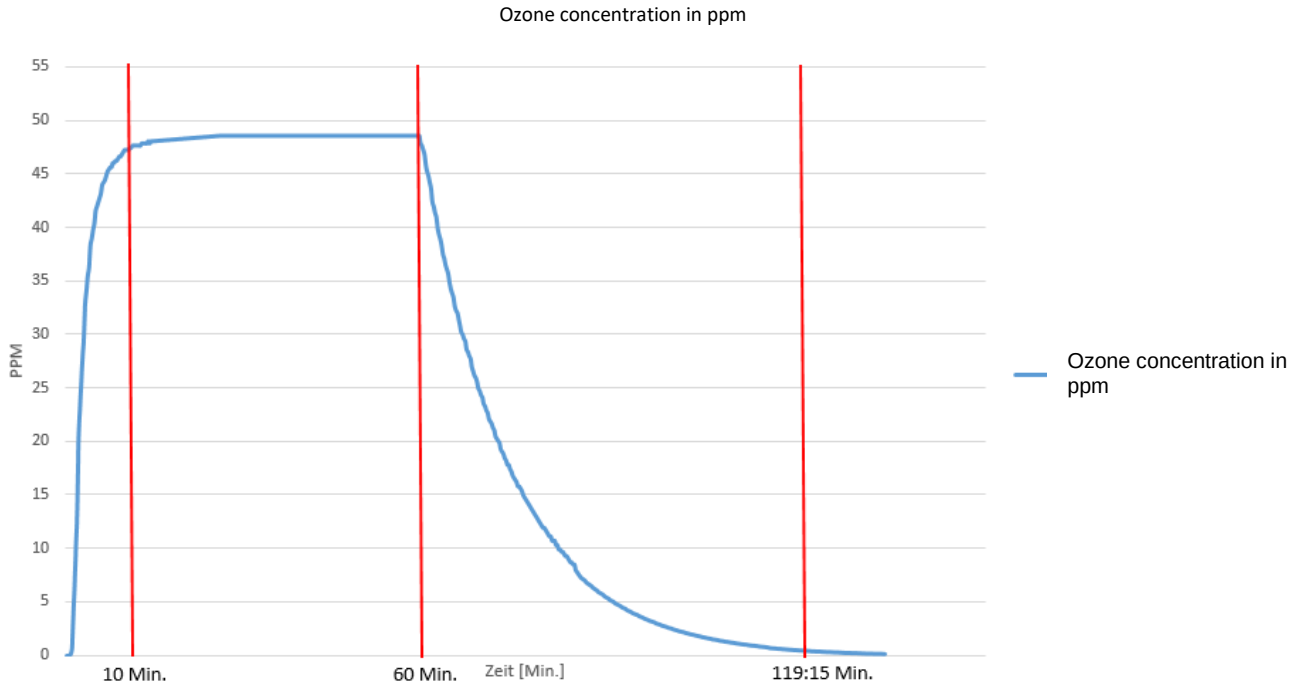
The ozone generating unit inside the OSS "Ten O3" was operated for 60 minutes in the test chamber. The ozone build-up in ppm was recorded over time.

After 60 minutes the ozone generator was switched off and the ozone depletion was also recorded.

Measurement results and evaluation:

With the help of the ozone test chamber, a diagram was recorded showing the ozone content in ppm over time.

Enclosed is the recorded diagram:



The diagram shows that after approx. 10 minutes the maximum ozone concentration of 48.0 ppm is reached in the test chamber.

As described in the test procedure, the ozone generator was switched off after 60 minutes. The measurement showed that after a further 59 minutes and 15 seconds the ozone content in the test chamber had dropped to 0.99 ppm and was therefore below the maximum value of 1 MAK.