

OZONE ULTRA PRO

NATURAL DEGRADATION OF OZONE

Ozone is a dying gas as it naturally reverts back into oxygen over time. This natural degradation can be unpredictable, as it is dependant on a range of factors including temperature, relative humidity and the nature and characteristics of the contents of the area where it is produced. The Ozone Ultra Pro's destruct feature ensures that Ozone concentrations are reduced in a rapid, predictable manner.

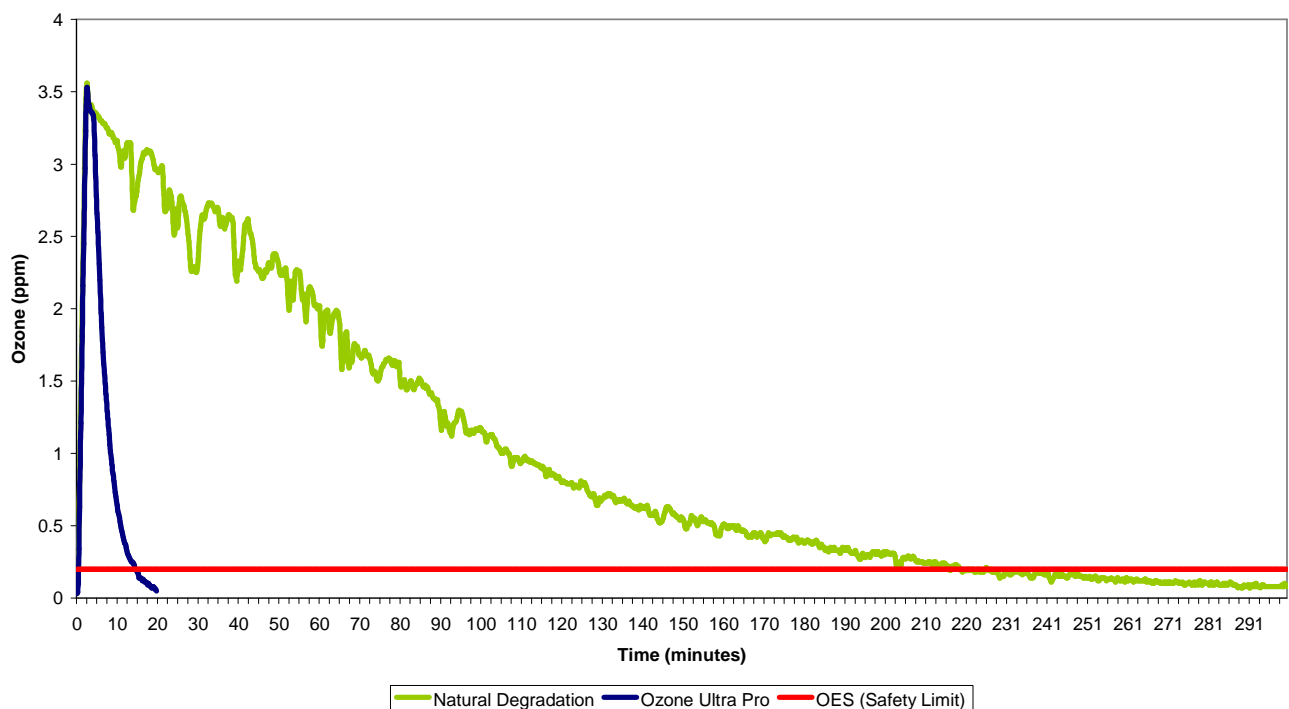
The graph below demonstrates the Ozone destruction capabilities of the Ozone Ultra Pro. The two production curves depict the ramp up and ramp down times for Ozone produced on the same day in a 29.7 m³ area under ambient conditions that are favourable for natural degradation.

METHOD

Using the Ozone Ultra Pro, Ozone was produced for two minutes in standard mode with a dwell time of two minutes. The machine was left to run the full treatment cycle (total time, 20 minutes) to destroy the residual Ozone produced. Once Ozone concentrations were returned to normal atmospheric levels (0.02ppm¹), the same machine was used to produce Ozone for a further two minutes, but this time the Ozone destruct cycle was not employed, allowing natural degradation to take its course. A UV Photometric Ozone Analyser was used to measure and log Ozone concentrations throughout the process.

Ambient conditions were: Temperature (20.8°C), Relative Humidity (53.5%)

Ozone Ultra Pro v Natural Degradation



As can be seen in the graph above, Ozone concentrations rose rapidly to above 3.5ppm within a short time. The Ultra Pro reduced Ozone concentrations to 0.06ppm within the treatment time in standard mode. When left to degrade naturally, Ozone concentrations returned to below the Health & Safety Executives (HSE) Occupational Exposure (OES)² Limit of 0.2ppm after 3.5 hours, and failed to match the Ultra Pro's 0.06ppm even after 5 hours.

¹ PPM = Parts Per Million

² HSE Guidance document EH 38 provides an Occupational Exposure Standard for Ozone in the UK. OES = 0.2ppm with maximum exposure time of 15 minutes