



GRAPHENSTONE®

Air Purification



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3. Air Purification

Air Quality

Poor indoor and outdoor air quality, caused by air pollution, is highly damaging for both human health and the natural environment.

Traditional paints can contribute to air pollution through off-gassing toxic gaseous compounds escaping into the air.

Ambient Pro+ contains only trace elements of VOCs but also can reduce airborne pollutants such as Nitrogen oxides. It does this through a process called photocatalysis: “Photo” (light) “Catalytic” (change / reaction)

Photocatalytic Qualities and Benefits

Photocatalytic mineral paints, via the inclusion of titanium dioxide crystals, use the energy from UV light to activate the catalyst (Titanium Dioxide), helping to neutralise pollution converting the molecules into oxygens and harmless nitrates.

The Titanium Dioxide catalyst creates a reaction that occurs on the surface of the paint, while the pollutants are not absorbed into the paint. The catalytic process lasts forever! It is active so long as there is paint on the wall and light to energise the chemical reaction. It does not wear out, the paint does not “get full” or need repainting.

**Ambient Pro+ is certified to ISO 22197-1:07 (Class 3)
Independent tests with UeL show a 55% reduction in NOx**



University of
East London

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Method

Sealed chamber was filled with NOx at various concentration levels. A model building painted in Ambient Pro+ was placed inside the chamber and the chamber was exposed to UVA NOx readings were taken before and after the placement of the model inside the chamber.

Results

At 100ppm concentration, the level of NOx was reduced by 55%

Ambient Pro+ can help neutralise pollutants such as NOx, SOx and VOCs



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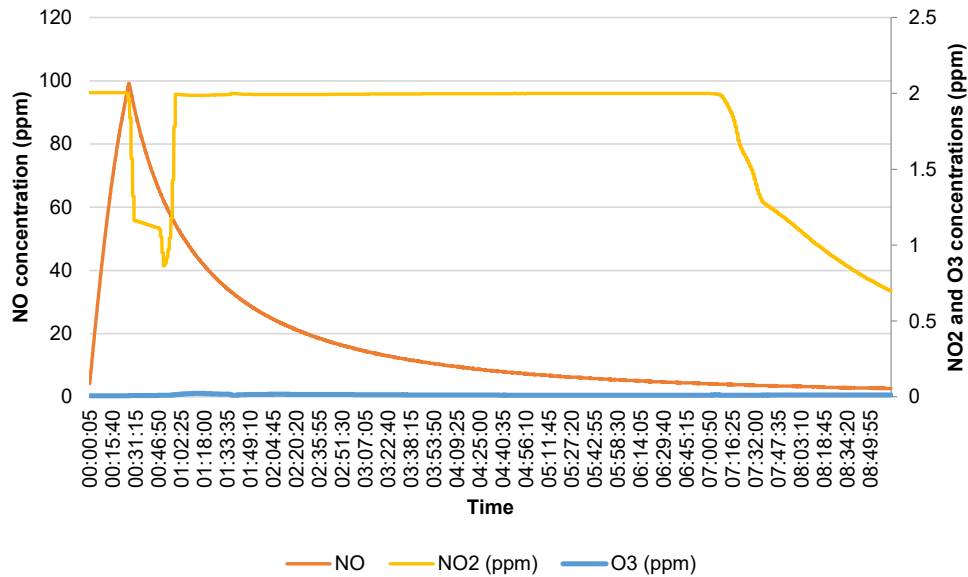


Figure 4. NO concentration (ppm) during the photoexperiment with 100ppm maximal NO concentration inside the chamber

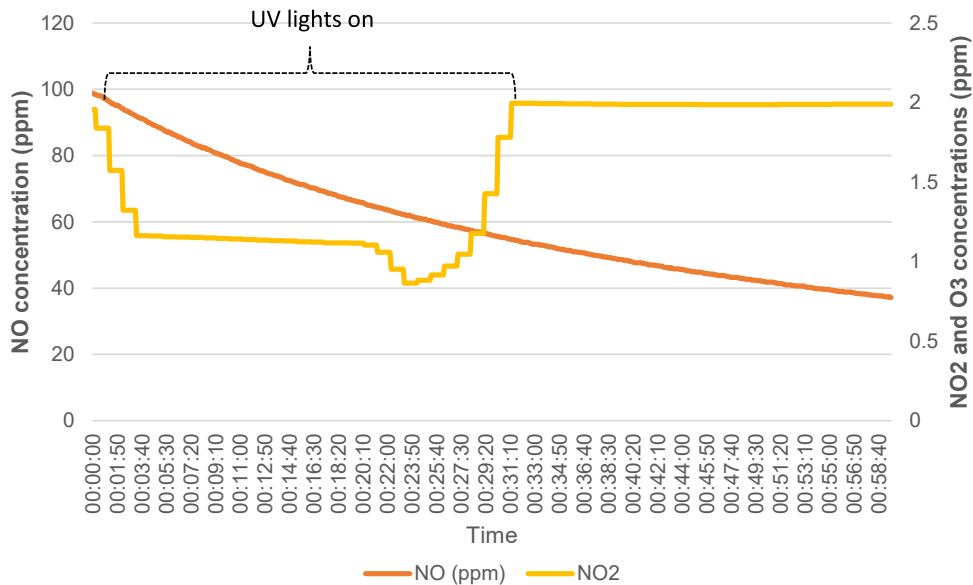


Figure 5. NO and NO₂ concentrations during the first hour with UV lights on inside the chamber in an experiment of a maximum of 100 ppm of NO concentration.

Ambient Pro+ can reduce the levels of NO_x by upto 55%