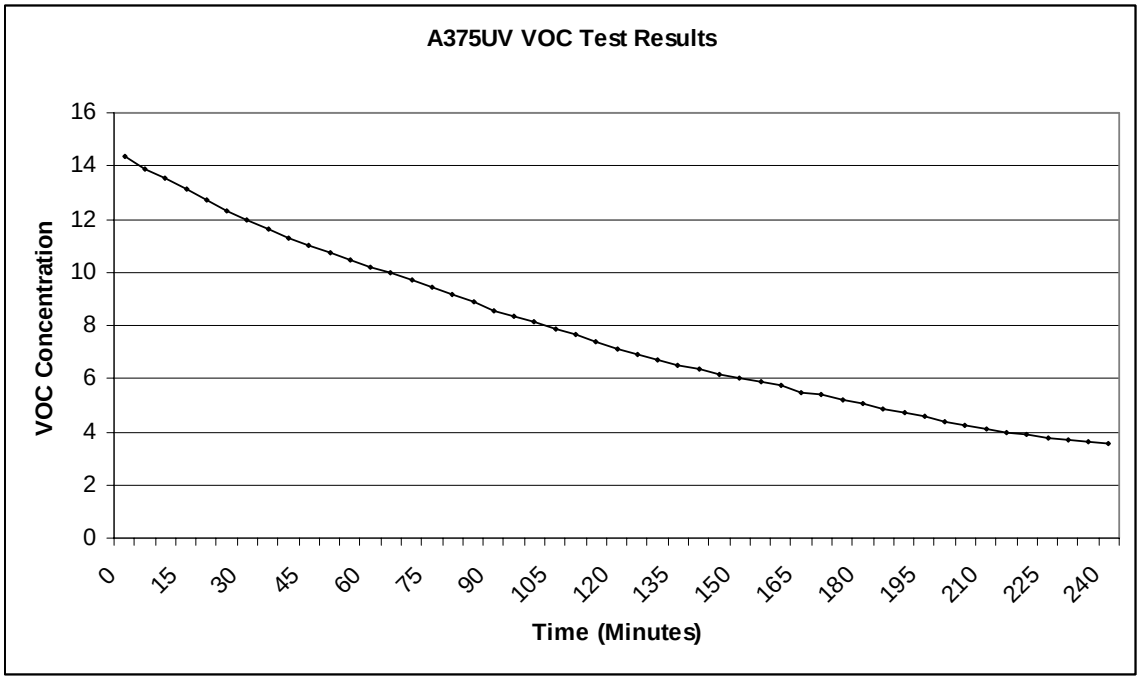
A375UV Photo Catalytic Oxidation Technology

A large contributing factor to poor indoor air quality is the release of VOC's. VOC's are organic (carbon based) and are emitted as gases from a variety of products. Also called hydrocarbons, VOC's vaporize due to sufficiently high vapor pressures.

The common indoor sources of VOC's are paint, carpeting, copiers/printers, laminated furniture, wood preservatives, paint thinner, glues, permanent markers, cosmetics and certain aerosols and plastics. If there is not sufficient ventilation with the outdoor air and VOC's are present, the indoor pollution levels can be up to 10 times higher than the outdoor air according to the EPA. And that includes urban areas.

The A375UV includes UV-PCO(UV Photo Catalytic Oxidation) technology to reduce the levels of VOC's. The interaction of UV-C light and a permanent titanium dioxide (TiO2) grid serves as a photocatalyst to carry out hydrolysis (ie.to break water into hydrogen and oxygen). As TiO2 is exposed to UV light, it becomes increasingly hydrophilic; thus, it can be used reduce concentrations of airborne pollutants such as volatile organic compounds into harmless elements. As a safety feature, the UV-C lights and titanium dioxide grid are located on the inner most section of the A375UV to prevent the user from coming into contact with the rays of the UV lights.



Note: VOC concentration was made up of a mixture of formaldehyde, xylene and benzene.