

Outdoor VOCs

There has been a lot of focus on VOCs in indoor air, from the EPA's statement that indoor air is 2-5 times worse than outdoor air (<http://www.epa.gov/iaq/voc.html>) to innumerable studies and discussions of the effects of poor indoor air quality, but there is much less discussion of VOCs from outdoor air. Outdoor air pollution is certainly a critical component of air pollution in general, especially for things like particulate matter and ozone, but for VOCs the outdoor air is typically a much less significant source than indoor air. Part of that is due to the relatively large amount of off gassing from products and activities in the indoor environment, but a more significant effect is the 'ventilation' of the outdoor air. Indoor environments are closed in and the dissipation of VOCs generated from products and activities is controlled by the mechanical systems of the building whereas the outdoor environment has a much greater air turnover from the normal air movement near the ground that extends several miles up. This area of the atmosphere, called the troposphere after the Greek word tropos for 'change,' has extensive air mixing because of the interaction with the Earth's surface. This high rate of air turnover in the outdoor air has the effect of quickly diluting the VOCs produced from outdoor sources so that they have a much smaller impact on air quality.

The average Total VOC value for samples submitted to Prism from outdoor environments is 180 ng/L, well below the 500 ng/L value recommended for indoor air by the US Green Building Council. Certain outdoor environments such as large urban areas or those with high biological content, i.e., lots of plants and animals, are likely to have higher VOC levels, but the VOCs are typically still much lower than the indoor environments.

About Prism Analytical Technologies, Inc.

Prism Analytical Technologies, Inc. is a leading consultative air testing laboratory in the United States that is devoted to the chemical identification and analysis of contaminants in the air. We are a recognized leader in the development and deployment of ambient air testing methodologies for Fortune 100 and 500 companies, industrial hygienists, and environmental consultants. Prism's science-based technologies and wide range of air testing support help clients solve indoor air quality, process control, industrial, and environmental challenges.