

Common air pollutants: volatile organic compounds

Volatile organic compounds (VOCs) are carbon-containing gases and vapors such as gasoline fumes and solvents (but excluding carbon dioxide, carbon monoxide, methane, and chlorofluorocarbons). Although there are many thousands of organic compounds in the natural and polluted troposphere that meet the definition of a [VOCs \(Volatile Organic Compounds\)](#), most measurement programs have concentrated on the 50 to 150 most abundant hydrocarbons.

Many individual [VOCs \(Volatile Organic Compounds\)](#) are known or suspected of having direct toxic effects on humans, ranging from carcinogenesis to neurotoxicity. A number of individual [VOCs \(Volatile Organic Compounds\)](#) (e.g. benzene, dichloromethane) have been assessed to be toxic under the Canadian Environmental Protection Act, 1999 (CEPA 1999). The more reactive [VOCs \(Volatile Organic Compounds\)](#) combine with nitrogen oxides (NO_x) in photochemical reactions in the atmosphere to form [ground-level ozone](#), a major component of [smog](#). [VOCs \(Volatile Organic Compounds\)](#) are also a precursor pollutant to the secondary formation of fine [particulate matter \(PM_{2.5}\)](#). Both ozone and [P.M. \(Particulate Matter\)_{2.5}](#) are known to have harmful effects on human health and the [environment](#).

For more detailed information about [VOCs \(Volatile Organic Compounds\)](#), visit the page [Volatile Organic Compounds in Consumer and Commercial Products](#).

- [Volatile organic compounds: history](#)

Date modified:

2013-07-17