

Trusted Technical Expertise.

Columbia Analytical is one of the few laboratories in the nation to offer analysis of indoor air, ambient air, sub-slab, and soil vapor samples via the Massachusetts Department of Environmental Protection (MassDEP) Air Phase Petroleum Hydrocarbons (APH) Method. This whole-air method is based upon EPA Method TO-15 (GC/MS, stainless steel canisters), but reports target compounds and aliphatic/aromatic hydrocarbon ranges specifically associated with petroleum products.



## Background

In February 2000, MassDEP published the first draft of the APH method; the method was recently updated in December 2008. The method is applicable to hazardous waste sites under the Massachusetts Contingency Plan (MCP; 310 CMR 40.0000) which may have vapor intrusion as a potential issue. This method is designed to complement and support the toxicological approach developed by the MassDEP to evaluate human health hazards that may result from exposure to petroleum hydrocarbons. It is intended to generate data that may be used in the characterization of risk at sites undergoing evaluation under the MCP.

## Depth of Experience

Columbia Analytical was one of the four original laboratories to participate in the 2001 MassDEP APH Round Robin study. During that time, Columbia Analytical also worked closely with MassDEP personnel to discuss technical issues with the method. Columbia Analytical keeps up-to-date with current developments in the field by participating in various technical committees and workgroups, including the MassDEP Bureau of Waste Site Cleanup Indoor Air Workgroup and the ASTM Vapor Intrusion Task Group.

## Application Outside of Massachusetts

While originally written for application at Massachusetts waste cleanup sites, the APH method can be applied at any site nationwide where petroleum product is potentially impacting indoor/ambient air quality. Petroleum hydrocarbons that may be evaluated using this method include gasoline, volatile fractions of kerosene, #2 fuel oil (diesel, heating), jet fuels and mineral spirits. Many states nationwide utilize a "fractionated TPH" approach to evaluating soil and groundwater contamination - the APH method is the appropriate complimentary air-phase analysis for sites where vapor intrusion is a concern.



## Why Choose Columbia Analytical?

Established in 1986, Columbia Analytical is an employee-owned, full service chemical and biological analytical laboratory network, headquartered in Kelso, Washington. The network is comprised of eight fixed laboratories in Arizona, California, Florida, New York, Texas and Washington. Our staff of over 400 employees includes chemists, biologists, computer scientists, technicians and support personnel. The diverse educational backgrounds and experience of our employees provide the comprehensive skills required in a modern analytical laboratory network.

Columbia Analytical specializes in the analysis of volatile and semi-volatile organic compounds, sulfur compounds and other hazardous substances in a wide variety of air and vapor matrices.

We take pride in our rigorous quality assurance program, state-of-the-art equipment, and tailoring our services to meet the individual needs of our clients. Columbia Analytical recognizes that our continued success is based on our ability to satisfy client needs by providing high quality, cost-effective, and timely analytical data.

With over 3000 canisters in its inventory and over 20 years experience analyzing air, Columbia Analytical has the resources to support any size air sampling project. We have performed tens of thousands of analyses and successfully served clients in all 50 states and around the globe.



### MassDEP APH Target Compound List

CAS NUMBER	COMPOUND NAME
106-99-0	1,3-Butadiene
1634-04-4	Methyl tert-Butyl Ether
71-43-2	Benzene
108-88-3	Toluene
100-41-4	Ethylbenzene
136777-61-2	m&p-Xylenes
95-47-6	o-Xylene
91-20-3	Naphthalene
N/A	C <sub>5</sub> -C <sub>8</sub> Aliphatic Hydrocarbons
N/A	C <sub>9</sub> -C <sub>12</sub> Aliphatic Hydrocarbons
N/A	C <sub>9</sub> -C <sub>10</sub> Aromatic Hydrocarbons

### Contact Information

2655 Park Center Drive, Suite A  
Simi Valley, CA 93065

805.526.7161  
805.526.7270 (fax)

[www.caslab.com](http://www.caslab.com)



An Employee-Owned Company