

TDT Air Scan®

The determination of over 500 Volatile Organic Compounds (VOCs) using a *single, simple-to-use air test*

TDT Air Scan® is a combination of instrument technology and methodology developed by Prism Analytical Technologies to address a wide range of VOC testing applications. Air testing ranges from residential to commercial to industrial building applications. TDT Air Scan® uses a multi-matrix thermal desorption tube to trap a wide range of both polar and non-polar organic compounds.

A TDT Air Scan® tube can be used with a standard personal monitoring pump. Depending upon the application, sampling flow rates can range from 50 to 200 ml/min. Sampling volumes typically do not exceed 40 L. More than 500 compounds can be determined using a TDT Air Scan® test.

PRISM
Analytical Technologies

Sample Report
Client Sample ID: Living Room
Laboratory ID: 6010-1

Analytical Report

Sample Summary

General information regarding the sample and aggregate concentrations, e.g., Total VOCs, are listed below. The top five highest concentration compounds in the air sample from both the quantitative TO17 and Semiquantitative Compounds are also listed. The full list of compounds and their concentrations in this air sample are listed later in the report and may be displayed more than once depending on the categorization of specific compounds.

Compound	Sample Concentration ng/L	Reporting Limit ng/L	Additional Information
Total VOCs	2500	200	Total volatile organic compounds calculated based on internal standard ratio; does not include C ₁ , C ₂ , or methanol.
Total Mold VOCs (TMVOC)	25	3	TMVOC is an assessment of the quantity of actively growing mold in the sample location.
Paint-Range VOCs	25		This is an estimate of the fraction of Total VOCs represented by the sum of compounds typically associated with latex paints, lacquers, enamels, varnishes, sealers, thinners, and polyurethane finishes.

TO17 Compounds

EPA Method TO17 focuses on chemical compounds that are typical and are also found in commercial and residential environments. Accuracy of the method is not guaranteed for all compounds listed. This section lists all the TO17 compounds in alphabetical order (compounds above the reporting limit have bolded reporting limits). Compounds are reported in two different units for easy comparison to exposure limits: volatility relative to adjacent n-alkanes. A more detailed description of the TO17 method is available at [EPA Method TO17](#).

Compound	CAS	Sample Concentration ng/L	Reporting Limit ng/L
Benzene	71-43-2	3.0	< 0.2
Bromobenzene	108-86-1	< 0.2	< 0.2
Bromochloromethane	74-97-5	< 0.2	< 0.2
Bromodichloromethane	75-27-4	< 0.2	< 0.2
Bromofrom	75-25-2	< 0.2	< 0.2
t _{er} t-Butylbenzene	98-09-6	< 0.2	< 0.2
sec-Butylbenzene	135-98-8	< 0.2	< 0.2
n-Butylbenzene	104-51-8	< 0.2	< 0.2
Carbon Tetrachloride	56-23-5	< 0.2	< 0.2
Chlorobenzene	108-90-7	< 0.2	< 0.2
Chlorodibromomethane	124-48-1	< 0.2	< 0.2
Chloroform	67-66-3	< 0.2	< 0.2
2-Chlorotoluene	95-49-8	< 0.2	< 0.001
4-Chlorotoluene	106-43-4	< 0.2	< 0.04
1,2-Dibromo-3-chloropropane	96-12-8	< 0.2	< 0.02
1,2-Dibromoethane	106-93-4	< 0.2	< 0.03
Dibromomethane	74-95-3	< 0.2	< 0.03
1,3-Dichlorobenzene	514-73-1	< 0.2	< 0.03
1,4-Dichlorobenzene	106-46-7	< 0.2	< 0.03
1,2-Dichlorobenzene	95-50-1	< 0.2	< 0.03
1,1-Dichloroethane	75-34-3	< 0.2	< 0.05
1,2-Dichloroethane	107-06-2	1.5	0.2
trans-1,2-Dichloroethene	156-60-5	< 0.2	< 0.05
1,1-Dichloroethene	75-35-4	< 0.2	< 0.05

Top 5

The top five highest concentration compounds in the air sample from both the quantitative TO17 and Semiquantitative Compounds are listed below.

TO17 Compounds	Compound	CAS	Sample Concentration ng/L	Reporting Limit ppb	ng/L	RI	Additional Information
	Toluene	108-88-3	110	29	0.2	808	3*
Semiquantitative Compounds	Compound	CAS	Sample Concentration ng/L	Reporting Limit ppb	ng/L	RI	Additional Information
	Ethanol	64-17-5	720	380	4	525	
	Acetic acid	64-19-7	120	46	4	715	
	Isopropanol	67-63-0	65	26	4	562	
	a-Pinene	80-56-8	55	10	4	970	

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TDT Air Scan® provides:

- ▶ **Capability to identify over 500 specific VOCs**
- ▶ **Detailed analytical report that includes results in ng/L and ppb**
- ▶ **CAS numbers, MW, and synonyms given for identified compounds**
- ▶ **Reports total VOCs (TVOC)**
- ▶ **Option for additional information e.g., sources, exposure limits, odor characteristics**
- ▶ **Glass-encapsulated sample tubes to minimize contamination** (U.S. Patent #7,566,421B2)
- ▶ **Easy shipping and handling**
- ▶ **1-year shelf life**
- ▶ **Compound categories include: aldehydes, alcohols, ketones, esters, sulfides hydrocarbons, aromatics, halogenates, nitro-nitriles**

TDT Air Scan® Benefits

- Easy to use - minimizes sampling errors
- Cost effective
- Low detection limits
- Creates baseline for routine and event-driven testing
- Answers question "What's in my air?"
- Helps identify VOC sources so air quality can be improved
- Identifies problem areas
- Prism provides help interpreting the analytical results

The TDT Advantage

	TDT	Canister	Bag
Good for Volatile Organic Compounds (VOCs)	✓	✓	~
Good for Semi-VOCs	✓		
Good for Very-VOCs	~	✓	~
Requires pump	✓		~
Whole air sample		✓	✓
Large sample volume (>10 L)	✓		
Fast sample collection	~	~	✓
Long shelf life	✓		✓
Long hold time	✓		
Coordination with lab not required	✓		~
Inexpensive to purchase	✓		✓
Inexpensive to ship	✓		~
Can be reconditioned and reused	✓	✓	

✓ Media applicable to this feature

~ Media may be applicable to this feature in some situations



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The Consultative Air Testing Company