

Instructions for: **Soil Volatiles (Cat # PT-VOA-SOIL) – with MeOH prep option**

SCOPE AND APPLICATION

Wibby Environmental's Soil Volatiles Proficiency Testing Standard is designed to be used with USEPA and other promulgated methods. You should be familiar with the method(s) before analyzing the standard. If you have any questions about the use of these standards, please contact Wibby Environmental Customer Service at 1-866-WibbyPT (866-942-2978).

SAMPLE PREPARATION AND ANALYSIS

1. For best results, the PT standard should be refrigerated and then brought to room temperature (near 20°C) when used.
2. The SOIL/HW Volatile standard includes two separate containers; a VOA vial containing Blank Soil Matrix and a flame sealed ampule containing the analytes of interest. The solvent for the Volatiles concentrate is methanol.
3. **Direct Purge Method:**
 - a. Open the Blank Soil Matrix vial and transfer 5.00 g of the matrix into your sparger cell.
 - b. Carefully open the ampule containing the Volatiles concentrate by snapping off the top of the ampule at the narrow part of the neck.
 - c. Transfer exactly 50 µL (micro liters) of the concentrate onto the Blank Soil Matrix in the sparger cell using a gas tight syringe. Add the spike below the surface of the matrix.
 - d. Add 5 ml of organic free deionized water to the sparger cell containing the Blank Solid Matrix and concentrate. The standard is now ready for analysis.
4. **Methanol Extraction Method:**
 - a. Open the Blank Soil Matrix vial and transfer 10.0 g of the matrix into your extraction vessel.
 - b. Carefully open the ampule containing the VOA concentrate by snapping off

the top of the ampule at the narrow part of the neck.

- c. Transfer exactly 100 µL (micro liters) of the concentrate onto the Blank Soil Matrix in the extraction vessel using a gas tight syringe. Add the spike below the surface of the matrix.
- d. Immediately add 10 ml of purge and trap grade methanol to the extraction vessel cell containing the Blank Solid Matrix and concentrate. The standard is now ready for extraction and analysis.

REPORTING RESULTS

1. Report all results on line at www.wibby.com. Click on the "Online data entry link" and follow the instructions to enter your results. As an alternative, you may submit your results using the Data Reporting Sheets enclosed with your standards by Fax to 866-283-0269.
2. For the purposes of reporting results, the percent moisture of the Volatile standard is 0% and the sample weight is 5.00 g (Direct Purge Method) or 10.0 g (MeOH Extraction Method).
3. Report results to three significant figures in µg/kg.
4. All results must be received by Wibby Environmental prior to the study closing date shown on the Data Reporting Sheets

SAFETY

These standards are designed for use by laboratory professionals who are familiar with handling environmental reference materials as well as hazardous materials. If you have any questions about the safe handling of these standards or require a Material Safety Data Sheet (MSDS,) please contact Wibby Environmental at 1-866-WibbyPT (866-942-2978).

QUESTIONS?

If you have any questions regarding these standards or reporting requirements, please call Wibby Environmental at 1-866-WibbyPT (866-942-2978).

Soil / Hazardous Waste PT Concentration Ranges and PTRLs

Definitions:

PTRL

NELAC Proficiency Testing Reporting Limits (PTRLs) are provided as guidance to laboratories analyzing NELAC PT samples. At a minimum, the laboratory should use a method that is sensitive enough to generate quantitative results at the PTRLs shown. (REF: NELAC PT FOT Tables)

NA

Not Applicable (NA) has been applied to analytes where a PTRL is not applicable and to state specific analytes that have not had a PTRL determined by the applicable accrediting agency.

Volatiles (PT-VOA-SOIL)

NELAC Code	Analyte	Units	Concentration Range	PTRL
4315	Acetone	µg/kg	200 - 1000	20.0
4375	Benzene	µg/kg	20.0 - 200	10.0
4395	Bromodichloromethane	µg/kg	20.0 - 200	10.0
4400	Bromoform	µg/kg	20.0 - 200	9.30
4410	2-Butanone (MEK)	µg/kg	100 - 500	10.0
4455	Carbon tetrachloride	µg/kg	20.0 - 200	9.90
4475	Chlorobenzene	µg/kg	20.0 - 200	10.0
4575	Chlorodibromomethane	µg/kg	20.0 - 200	9.90
4505	Chloroform	µg/kg	20.0 - 200	11.0
4570	1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	40.0 - 200	4.00
4585	1,2-Dibromoethane (EDB)	µg/kg	40.0 - 200	24.0
4610	1,2-Dichlorobenzene	µg/kg	20.0 - 200	8.90
4615	1,3-Dichlorobenzene	µg/kg	20.0 - 200	5.10
4620	1,4-Dichlorobenzene	µg/kg	20.0 - 200	7.00
4630	1,1-Dichloroethane	µg/kg	20.0 - 200	11.0
4635	1,2-Dichloroethane	µg/kg	20.0 - 200	12.0
4640	1,1-Dichloroethene	µg/kg	40.0 - 200	13.0
4645	cis-1,2-Dichloroethene	µg/kg	40.0 - 200	20.0
4700	trans-1,2-Dichloroethene	µg/kg	40.0 - 200	23.0
4655	1,2-Dichloropropane	µg/kg	20.0 - 200	12.0
4765	Ethylbenzene	µg/kg	20.0 - 200	9.40
4860	2-Hexanone	µg/kg	80.0 - 400	20.0
4975	Methylene chloride (Dichloromethane)	µg/kg	20.0 - 200	9.00
5000	Methyl-tert-butyl ether (MTBE)	µg/kg	20.0 - 200	7.80
4995	4-Methyl-2-pentanone (MIBK)	µg/kg	80.0 - 400	32.0
5005	Naphthalene	µg/kg	40.0 - 200	6.00
5100	Styrene	µg/kg	40.0 - 200	24.0
5105	1,1,1,2-Tetrachloroethane	µg/kg	20.0 - 200	12.0
5110	1,1,2,2-Tetrachloroethane	µg/kg	20.0 - 200	8.90
5115	Tetrachloroethene	µg/kg	20.0 - 200	8.30
5140	Toluene	µg/kg	20.0 - 200	11.0
5155	1,2,4-Trichlorobenzene	µg/kg	40.0 - 200	16.0
5160	1,1,1-Trichloroethane	µg/kg	20.0 - 200	9.00
5165	1,1,2-Trichloroethane	µg/kg	20.0 - 200	13.0
5170	Trichloroethene	µg/kg	20.0 - 200	9.70
5180	1,2,3-Trichloropropane	µg/kg	40.0 - 200	8.30
5260	Xylenes, total	µg/kg	40.0 - 400	18.0
Additional State Specific Analytes				
4320	Acetonitrile	µg/kg	50.0 - 200	NA
4325	Acrolein	µg/kg	20.0 - 200	NA
4340	Acrylonitrile	µg/kg	20.0 - 200	NA

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NA

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Volatiles (PT-VOA-SOIL) cont'd

NELAC Code	Analyte	Units	Concentration Range	PTRL
Additional State Specific Analytes cont'd				
4385	Bromobenzene	µg/kg	40.0 - 200	10.0
4390	Bromochloromethane	µg/kg	20.0 - 200	NA
4950	Bromomethane	µg/kg	2000 - 10000	500
4435	n-Butylbenzene	µg/kg	20.0 - 200	NA
4440	sec-Butylbenzene	µg/kg	20.0 - 200	NA
4445	tert-Butylbenzene	µg/kg	20.0 - 200	NA
4450	Carbon disulfide	µg/kg	20.0 - 200	NA
4465	Chloroacetaldehyde	µg/kg	20.0 - 200	NA
4485	Chloroethane	µg/kg	80.0 - 200	20.0
5765	bis(2-Chloroethyl)ether	µg/kg	20.0 - 200	NA
5760	bis(2-Chloroethoxy)methane	µg/kg	20.0 - 200	NA
5780	bis(2-Chloroisopropyl)ether	µg/kg	20.0 - 200	NA
4500	2-Chloroethylvinylether	µg/kg	20.0 - 200	NA
4960	Chloromethane	µg/kg	80.0 - 200	20.0
4535	2-Chlorotoluene	µg/kg	20.0 - 200	NA
4540	4-Chlorotoluene	µg/kg	20.0 - 200	NA
4595	Dibromomethane	µg/kg	20.0 - 200	NA
4625	Dichlorodifluoromethane	µg/kg	80.0 - 200	20.0
4660	1,3-Dichloropropane	µg/kg	20.0 - 200	NA
4665	2,2-Dichloropropane	µg/kg	20.0 - 200	NA
4670	1,1-Dichloropropene	µg/kg	20.0 - 200	NA
4680	cis-1,3-Dichloropropene	µg/kg	40.0 - 200	10.0
4685	trans-1,3-Dichloropropene	µg/kg	40.0 - 200	10.0
9375	DIPE	µg/kg	20.0 - 200	NA
4840	Hexachloroethane	µg/kg	20.0 - 200	NA
4835	Hexachlorobutadiene	µg/kg	20.0 - 200	NA
4900	Isopropylbenzene	µg/kg	40.0 - 200	10.0
4910	p-Isopropyltoluene	µg/kg	20.0 - 200	NA
5090	n-Propylbenzene	µg/kg	20.0 - 200	NA
4370	TAME	µg/kg	20.0 - 200	NA
5150	1,2,3-Trichlorobenzene	µg/kg	20.0 - 200	NA
5175	Trichlorofluoromethane	µg/kg	80.0 - 200	20.0
5210	1,2,4-Trimethylbenzene	µg/kg	20.0 - 200	NA
5215	1,3,5-Trimethylbenzene	µg/kg	20.0 - 200	NA
5225	Vinyl acetate	µg/kg	20.0 - 200	NA
5235	Vinyl chloride	µg/kg	80.0 - 200	20.0
5250	o-Xylene	µg/kg	20.0 - 400	NA
5240	m+p-Xylene	µg/kg	20.0 - 400	NA