

**State Water Resources Control Board (SWRCB)****Letter No. 017****Subject:** 8021ML, Analysis Minimal List of VOCs by 8021B**Date:** April 26, 2002**Overview**

With the current AB 2886 implementation, in some cases, soil and water samples are analyzed for VOCs (halogenated and aromatic) by USEPA Method 8021B.

- This method cannot be used for reporting of Tert-butyl Alcohol (TBA) data.
- This method may give false positive detections of MTBE if high concentrations of petroleum hydrocarbons (i.e greater than 1000 ppb total) are present in the sample.
- For data comparability purposes the SWRCB recommends the following minimal analyte list, spiking compounds, surrogate compounds, and reporting limits for this method.

**Special Conditions**

This applies to all sample matrices.

**Areas of Impact**

Field(s): *ANMCODE, PARLABEL*

Entry: *ANMCODE* = "8021ML" (VOCs by SW8021, Minimal List)  
*PARLABEL* = various, refer to table

**Policy:****a) Quality Control Requirements**

Preparation/analytical batch should include:

- one laboratory method blank
- one matrix spike
- one matrix spike duplicate or one matrix duplicate if target compounds are present
- one blank spike

Control limits for the blank spike/blank spike duplicates are 70% - 130% per SW-846.

b) Analytes

“8021ML” Spiking Compounds

PARLABEL	Description
<b>Halogenated Compounds<sup>1</sup></b>	
TCLME	Chloroform <sup>1</sup>
DCA11	1,1-Dichloroethane <sup>1</sup>
DCA12	1,2-Dichloroethane <sup>1</sup>
DCE11	1,1-Dichloroethene <sup>1,2</sup>
PCE	Tetrachloroethene (PCE) <sup>1</sup>
TCE	Trichloroethene (TCE) <sup>1,2</sup>
<b>Aromatic Compounds<sup>1</sup></b>	
BZ	Benzene <sup>1,2</sup>
BZME	Toluene <sup>1,2</sup>
CLBZ	Chlorobenzene <sup>2</sup>
<b>Oxygenate Compounds<sup>1</sup></b>	
MTBE	Methyl-tert-butyl ether (MTBE) <sup>1</sup>

<sup>1</sup> From Region 4

<sup>2</sup> Minimum spiking requirements recommended in SW-846

“8021ML” Analytes and Detection Limits

PARLABEL	Description	Order	Surr.	Water (ug/L)			Soil (ug/kg)	
				MDL	MRL	MCL	MDL	MRL
BZ	Benzene	1		0.009	0.5	1.0		1.0
BDCME	Bromodichloromethane	2			1			2
TBME	Bromoform	3			1			2
BRME	Bromomethane	4			1			2
CTCL	Carbon tetrachloride	5			0.5	0.5		1.0
CLBZ	Chlorobenzene	6		0.003	1			2
DBCME	Dibromochloromethane	7			1			2
CLEA	Chloroethane	8			1			2
TCLME	Chloroform	9			1			2
CLME	Chloromethane	10			1			2
DCBZ12	1,2-Dichlorobenzene	11		0.05	1			2
DCBZ13	1,3-Dichlorobenzene	12		0.02	1			2
DCBZ14	1,4-Dichlorobenzene	13		0.007	1			2
FC12	Dichlorodifluoromethane	14			0.5	1.0*		1
DCA11	1,1-Dichloroethane	15			1			2
DCA12	1,2-Dichloroethane	16			0.5	0.5		1
DEC11	1,1-Dichloroethene	17			1			2
DCE12T	trans-1,2-Dichloroethene	18			1			2

PARLABEL	Description	Order	Surr.	Water (ug/L)			Soil (ug/kg)	
				MDL	MRL	MCL	MDL	MRL
DCPA12	1,2-Dichloropropane	19			1			2
DCP13C	cis-1,3-Dichloropropene	20			1			2
DCP13T	trans-1,3-Dichloropropene	21			1			2
EBZ	Ethylbenzene	22		0.005	1			2
ETOX	Ethylene oxide	23			1			2
MTLNCL	Methylene chloride	24		0.05	1			2
TC1112	1,1,1,2-Tetrachloroethane	25			1			2
PCA	1,1,2,2-Tetrachloroethane	26			1			2
PCE	Tetrachloroethene (PCE)	27		0.05	1			2
BZME	Toluene	28		0.01	1			2
TCA111	1,1,1-Trichloroethane	29			1			2
TCA112	1,1,2-Trichloroethane	30			1			2
TCE	Trichloroethene (TCE)	31		0.02	1			2
FC11	Trichlorofluoromethane	32			1			2
VC	Vinyl chloride	33		0.02	0.5	0.5		1
XYLO	o-Xylene	34		0.02	1			2
XYLM	m-Xylene	35		0.01	1			2
XYLP	p-Xylene	36		0.01	1			2
DBFM	Dibromofluoromethane	37			1			2
DCE12C	cis-1,2-Dichloroethene	38			1			2
MTBE	Methyl-tert-butyl ether (MTBE)	39			2			5
ETBE	Ethyl tert-butyl ether (ETBE)	40			2			5
TAME	tert-Amyl methyl ether (TAME)	41			2			5
DIPE	Di-isopropyl ether (DIPE)	42			2			5
EDB	1,2-Dibromoethane	44			1			2
ETHANOL	Ethanol (EtOH)	45			1000			1000
DCBTA14	1,4-Dichlorobutane <sup>1</sup>		4					
BRCLBZ4	4-Bromochlorobenzene <sup>1</sup>		4					

MDL – Method Detection Limit (from SW-846 – PID limit)

MRL – Method Reporting Limit (from Region 4)

MCL – Maximum Contamination Limit (from DHS California Drinking Water Quality Database 01/08/2002)

\*Action Limit (from Region 4)

<sup>1</sup> SW-846 recommended surrogate