

AQS & Toxics Data



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§ Method/MDL/Summary Scale/Summaries

§ Method Issues

§ Monitor Creation Issues

§ Report/Retrieval Issues

§ Units Issues

Method/MDL/Summary Scale/ Summaries

- § Each method has Federal method detection limit (MDL) and summary scale (number of decimal places in standard units).
- § Sample specific alt MDL can be reported with each sample value.
- § Conversion to standard units may lose precision of data.
- § System modification needed to prevent loss.

Method/MDL/Summary Scale/ Summaries

Browse Sample Methodology (Read Only)

Parameter Code	Samp Anal Desc	Fed MDL	Duration Code	Unit	Coll Freq Code	Summary Scale	Recording Mode
82220	HPLC SCANNING FLUORESCENCE	.05	7	001		2	INTERMITTENT
82220	HPLC SCANNING FLUORESCENCE	.05	7	003		2	INTERMITTENT
82220	HPLC SCANNING FLUORESCENCE	.05	7	001	6	2	INTERMITTENT
82220	HPLC SCANNING FLUORESCENCE	.05	7	003	6	2	INTERMITTENT
82220	HPLC SCANNING FLUORESCENCE	.05	7	001	5	2	INTERMITTENT
82220	HPLC SCANNING FLUORESCENCE	.05	7	003	5	2	INTERMITTENT
82220	HPLC SCANNING FLUORESCENCE	.05	7	001	4	2	INTERMITTENT
82220	HPLC SCANNING FLUORESCENCE	.05	7	003	4	2	INTERMITTENT
82220	HPLC SCANNING FLUORESCENCE	.05	7	001	3	2	INTERMITTENT
82220	HPLC SCANNING FLUORESCENCE	.05	7	003	3	2	INTERMITTENT
82220	HPLC SCANNING FLUORESCENCE	.05	7	001	2	2	INTERMITTENT
82220	HPLC SCANNING FLUORESCENCE	.05	7	003	2	2	INTERMITTENT
82220	HPLC SCANNING FLUORESCENCE	.05	7	001	1	2	INTERMITTENT
82220	HPLC SCANNING FLUORESCENCE	.05	7	003	1	2	INTERMITTENT
82220	HPLC SCANNING FLUORESCENCE	.05	7	001	7	2	INTERMITTENT

Method/MDL/Summary Scale/ Summaries

Maintain - Raw Data (Read Only)

Raw Data | Qualifiers | Comments

State: 06 | County: 085 | Site: 0005 | Parameter: 82220 | POC: 5 | Begin Date: | End Date:

Raw Data

Mp ID	Samp Begin Date	Stat Ind	Qual Data	Reported Sample Value	Reported Scale	Standard Sample Value	Std Unit	EPA Ind	Freeze Ind	Action Ind	Exclusion Ind	Exclusion Date	Uncertainty Value
1	20031024 00:00	P	N	.23	2	0	001						
1	20031012 00:00	P	N	.025	3	.00003	001						
1	20030930 00:00	P	N	.08	2	0	001						
1	20030918 00:00	P	N	.09	2	0	001						
1	20030906 00:00	P	N	.025	3	.00003	001						
1	20030825 00:00	P	N	.06	2	0	001						
1	20030813 00:00	P	N	.025	3	.00003	001						
1	20030801 00:00	P	N	.025	3	.00003	001						
1	20030720 00:00	P	N	.025	3	.00003	001						
1	20030708 00:00	P	N	.06	2	0	001						

Monitor Protocols

Mp ID	Parameter	Method	Unit	Duration	Coll Frequency	Alt Mdl
1	82220	063	003	7	7	.05

Method/MDL/Summary Scale/ Summaries

- § Value 0.23 (003) for 10/24 is greater than alt MDL (0.05). It is converted to standard units 0.00023 (001) rounded 0.00 to summary scale (2) for method rather than to 0.00023 with conversion of units
- § Value for 10/12 is less than alt MDL so substitution is performed and rounded to 5-digits (maximum per database design) $0.005/1000 \times 2 = 0.000025 = 0.000003$

Method/MDL/Summary Scale/ Summaries

§ Annual Summary maximum should be 0.00023 on 20031024 rather than 0.00003 which is $\frac{1}{2}$ alt MDL.

Method/MDL/Summary Scale/ Summaries

State Code	08	County Code	085	Site ID	0005	Parameter Code	82220	POC	5
Summary Year	2003	Duration Code	7	EDT	0				

Summary Maximums

	Max Level	Max Sample Value	Max Coll Date
▲	1	.00003	20030322
	2	.00003	20030415
	3	.00003	20030427
	4	.00003	20030509
▼	5	.00003	20030521

Method/MDL/Summary Scale/ Summaries

§ The solution is to compute and store a summary scale for each alt MDL. This summary scale would be used to determine the precision of the values reported with that specific alt MDL.

Method Issues

- § Compiled and distributed existing methods for initial pilot toxic monitoring.
- § Need new method codes to reflect current analysis capabilities with lower MDL.
- § Method codes easily assigned when information provided.
- § Assign same method code for same method for all parameters.

Monitor Creation Issues

§ How to create the 5 required monitor transactions for approximately 20 toxic parameters?

- Maintain monitor for first parameter and then duplicate monitor.
- Create monitor transactions with AMP500 and edit.
- Create monitor transactions with a spreadsheet.
- Create monitor transactions with Correct.

Report/Retrieval Issues

- § Standard units not mass per volume for organic pollutants.
- § Retrieve by Pollutant Type “Core_HAPS”.
- § Assign new monitor type for identification/retrieval ?
- § Is new toxic summary report needed with:
 - Conversion to mass per volume units?
 - Other special options ?

Units Issues

- § Parameter has a standard units assigned.
- § Raw data stored as reported and converted to standard units.
- § Annual summaries in standard units.
- § Standard units incorrect for toxic analysis
 - PAMS organics (benzene, carbonyls) ppb C
 - PM species
 - TSP metals, PM10 metals ug/m³ STP
 - PM2.5 metals ug/m³ LC

Units Issues

§ Standard units lack precision ng/m³ to ug/m³ loose 3 digits – concentration range too broad.

§ Solution

- Assign new pollutant code with different units ?
- Change standard units for current pollutants ?