

Samples: 2017 Fall Penobscoct Plot Study Mini Core soils
Lab: SERC
Analyst: Alyssa McBurney
QA C Gilmour
Samples: 18
Analysis Date: 10/19/2017

Calibration Std: BrooksRand 1ppm MeHgOH (purchased 2/2014) diluted to 1ppb on 10/5/2018
QCS Std: BrooksRand 1ppm MeHgCl (purchased 2/2014) diluted to 1ppb on 10/5/2017

ID: MeHg199 synthesized 9/2015
1:1000 stock dilution 9/19/2017
1:10 working dilution 10/18/2017
ID value: 1.04 ng/mL

RL is calculated from 3X the standard deviation of digestion blanks, corrected to sample mass and ID recovery for each sample

Sample Data

*mass of freeze dried material distilled

LAB SAMPLE ID	SITE	COLLECTION DATE	SAMPLE TYPE	TREATMENT	TREATMENT NUMBER	PLOT	ROW	ANALYSIS DATE	SOURCE FILE	PARAMETER	VALUE	RL	DL FLAG	UNITS	SAMPLE WEIGHT	ID RECOVERY	ANALYSIS COMMENT
PB17-7020	West	9/18/2017	Bulk solid	W21-UM -West-A 2		R1.2-Biochar	Biochar	10/19/2017	20171019 MERX	MeHg-solid	18.41	0.21		ng/gdw	0.057	72%	
PB17-7031	West	9/18/2017	Bulk solid	W21-UM -West-A 1		R1.3-Control	Control	10/19/2017	20171019 MERX	MeHg-solid	5.92	0.17		ng/gdw	0.056	90%	
PB17-7042	West	9/18/2017	Bulk solid	W21-UM -West-A	3	R1.5-Sedimite	Sedimite	10/19/2017	20171019 MERX	MeHg-solid	3.34	0.19		ng/gdw	0.057	79%	
PB17-7042	West	9/18/2017	Bulk solid	W21-UM -West-A 3		R1.5-Sedimite	Sedimite	10/19/2017	20171019 MERX	MeHg-solid	4.07	0.18		ng/gdw	0.060	81%	distillation duplicate
PB17-7053	West	9/18/2017	Bulk solid	W21-UM -West-A 2		R2.2-Biochar	Biochar	10/19/2017	20171019 MERX	MeHg-solid	14.76	0.19		ng/gdw	0.058	79%	
PB17-7064	West	9/18/2017	Bulk solid	W21-UM -West-A 1		R2.4-Control	Control	10/19/2017	20171019 MERX	MeHg-solid	7.36	0.13		ng/gdw	0.071	94%	
PB17-7075	West	9/18/2017	Bulk solid	W21-UM -West-A 3		R2.1-Sedimite	Sedimite	10/19/2017	20171019 MERX	MeHg-solid	6.42	0.16		ng/gdw	0.068	79%	
PB17-7086	West	9/18/2017	Bulk solid	W21-UM -West-A 2		R3.3-Biochar	Biochar	10/19/2017	20171019 MERX	MeHg-solid	24.08	0.16		ng/gdw	0.065	85%	
PB17-7097	West	9/18/2017	Bulk solid	W21-UM -West-A	1	R3.2-Control	Control	10/19/2017	20171019 MERX	MeHg-solid	11.89	0.11		ng/gdw	0.085	93%	
PB17-7108	West	9/18/2017	Bulk solid	W21-UM -West-A 3		R3.4-Sedimite	Sedimite	10/19/2017	20171019 MERX	MeHg-solid	10.41	0.15		ng/gdw	0.072	80%	
PB17-7108	West	9/18/2017	Bulk solid	W21-UM -West-A 3		R3.4-Sedimite	Sedimite	10/19/2017	20171019 MERX	MeHg-solid	9.48	0.17		ng/gdw	0.062	81%	distillation duplicate
PB17-7119	Central	9/18/2017	Bulk solid	V21-UM-Central-	2	R1.2-Biochar	Biochar	10/19/2017	20171019 MERX	MeHg-solid	22.34	0.19		ng/gdw	0.056	81%	
PB17-7130	Central	9/18/2017	Bulk solid	V21-UM-Central-	1	R1.3-Control	Control	10/19/2017	20171019 MERX	MeHg-solid	9.92	0.17		ng/gdw	0.058	86%	
PB17-7141	Central	9/18/2017	Bulk solid	V21-UM-Central-	3	R1.5-Sedimite	Sedimite	10/19/2017	20171019 MERX	MeHg-solid	10.47	0.21		ng/gdw	0.055	74%	
PB17-7152	Central	9/18/2017	Bulk solid	V21-UM-Central-	2	R2.2-Biochar	Biochar	10/19/2017	20171019 MERX	MeHg-solid	22.64	0.16		ng/gdw	0.065	82%	
PB17-7163	Central	9/18/2017	Bulk solid	V21-UM-Central-	1	R2.4-Control	Control	10/19/2017	20171019 MERX	MeHg-solid	10.87	0.17		ng/gdw	0.055	88%	
PB17-7174	Central	9/18/2017	Bulk solid	V21-UM-Central-	3	R2.1-Sedimite	Sedimite	10/19/2017	20171019 MERX	MeHg-solid	7.41	0.17		ng/gdw	0.063	92%	
PB17-7185	Central	9/18/2017	Bulk solid	V21-UM-Central-	2	R3.3-Biochar	Biochar	10/19/2017	20171019 MERX	MeHg-solid	26.15	0.16		ng/gdw	0.061	87%	
PB17-7185	Central	9/18/2017	Bulk solid	V21-UM-Central-	2	R3.3-Biochar	Biochar	10/19/2017	20171019 MERX	MeHg-solid	27.14	0.16		ng/gdw	0.062	86%	distillation duplicate
PB17-7196	Central	9/18/2017	Bulk solid	V21-UM-Central-	1	R3.2-Control	Control	10/19/2017	20171019 MERX	MeHg-solid	8.16	0.16		ng/gdw	0.060	93%	
PB17-7207	Central	9/18/2017	Bulk solid	V21-UM-Central-	3	R3.4-Sedimite	Sedimite	10/19/2017	20171019 MERX	MeHg-solid	6.53	0.17		ng/gdw	0.070	73%	

QC Data

Sample Replicates

Sample ID	Analysis Date	Parameter	Value	RL	Units	ID Recovery	Ambient:Spike
PB17-7042	10/19/2017	MeHg-solid		3.34	0.19 ng/gdw	79%	9.11
PB17-7042	10/19/2017	MeHg-solid		4.07	0.18 ng/gdw	81%	7.10
		%RPD		20%			
PB17-7108	10/19/2017	MeHg-solid		10.41	0.15 ng/gdw	80%	2.31
PB17-7108	10/19/2017	MeHg-solid		9.48	0.17 ng/gdw	81%	2.95
		%RPD		9%			
PB17-7185	10/19/2017	MeHg-solid		26.15	0.16 ng/gdw	87%	1.09
PB17-7185	10/19/2017	MeHg-solid		27.14	0.16 ng/gdw	86%	1.03
		%RPD		4%			

Reference Material

*Nist1566b Oyster Tissue, certified at 13.2 ± 0.7 ng/gdw

Sample ID	Analysis Date	QC Type	Position	Parameter	Method	QC value	QC Nominal	Units	% recovery	RL	Unit	ID Recovery	Comment
Nist 1566 R1	10/19/2017	CRM		49 MeHg-solid	Distillation	13.03	13.20	ng/gdw	99%		0.03 ng/gdw		78% 3 mLs of distillate analyzed
Nist 1566 R2	10/19/2017	CRM		50 MeHg-solid	Distillation	12.75	13.20	ng/gdw	97%		0.04 ng/gdw		74% 3 mLs of distillate analyzed

Distillation Blanks

Sample ID	Analysis Date	QC Type	Position	Parameter	Method	QC value	Units	RL	Unit	ID Recovery	Comment
Dist. Blank 1	10/19/2017	Distillation blank		32 MeHg-solid	Distillation	0.09	ng/L		0.02 ng/L	55%	whole distillate analyzed
Dist. Blank 2	10/19/2017	Distillation blank		33 MeHg-solid	Distillation	0.08	ng/L		0.02 ng/L	62%	whole distillate analyzed
Dist. Blank 3	10/19/2017	Distillation blank		34 MeHg-solid	Distillation	0.07	ng/L		0.02 ng/L	59%	whole distillate analyzed
					Average	0.08					
					Std Dev.	0.01					
					% RSD	14%					
					DL	0.03 ng/L					