

Samples:	2017 Fall Penobsoct Plot Study Mini Core soils		
Lab:	SERC		
Analyst:	Alyssa McBurney		
QA	C Gilmour		
Samples:	18		
Calibration Std:	BrooksRand 1ppm MeHgOH (purchased 2/2018) diluted to 1ppb on 2/21/2018		
QCS Std:	BrooksRand 1ppm MeHgCl (purchased 2/2014) diluted to 1ppb on 11/7/2017		
ID:	Me199Hg synthesized 9/2015		
	1:1000 stock dilution	11/19/2017	
	1:10 working dilution	2/20/2018	
ID value:	1.17 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	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	2/21/2018	MeHg-solid	19.44	0.06464		ng/gdw	0.057	69%	
PB17-7031	West	9/18/2017	Bulk solid	W21-UM -West-A	1	R1.3-Control	Control	2/21/2018	MeHg-solid	6.089	0.04263		ng/gdw	0.061	93%	
PB17-7042	West	9/18/2017	Bulk solid	W21-UM -West-A	3	R1.5-Sedimite	Sedimite	2/21/2018	MeHg-solid	3.328	0.0542		ng/gdw	0.069	65%	
PB17-7042	West	9/18/2017	Bulk solid	W21-UM -West-A	3	R1.5-Sedimite	Sedimite	2/21/2018	MeHg-solid	3.388	0.04546		ng/gdw	0.071	73%	distillation duplicate
PB17-7053	West	9/18/2017	Bulk solid	W21-UM -West-A	2	R2.2-Biochar	Biochar	2/21/2018	MeHg-solid	14.45	0.05271		ng/gdw	0.058	78%	
PB17-7064	West	9/18/2017	Bulk solid	W21-UM -West-A	1	R2.4-Control	Control	2/21/2018	MeHg-solid	7.833	0.03722		ng/gdw	0.068	97%	
PB17-7075	West	9/18/2017	Bulk solid	W21-UM -West-A	3	R2.1-Sedimite	Sedimite	2/21/2018	MeHg-solid	5.978	0.04975		ng/gdw	0.057	86%	
PB17-7086	West	9/18/2017	Bulk solid	W21-UM -West-A	2	R3.3-Biochar	Biochar	2/21/2018	MeHg-solid	29.61	0.04176		ng/gdw	0.068	88%	
PB17-7097	West	9/18/2017	Bulk solid	W21-UM -West-A	1	R3.2-Control	Control	2/21/2018	MeHg-solid	13.49	0.04388		ng/gdw	0.058	95%	
PB17-7108	West	9/18/2017	Bulk solid	W21-UM -West-A	3	R3.4-Sedimite	Sedimite	2/21/2018	MeHg-solid	9.252	0.04157		ng/gdw	0.077	72%	
PB17-7119	Central	9/18/2017	Bulk solid	W21-UM-Central-B	2	R1.2-Biochar	Biochar	2/21/2018	MeHg-solid	23.91	0.05195		ng/gdw	0.054	91%	
PB17-7119	Central	9/18/2017	Bulk solid	W21-UM-Central-B	2	R1.2-Biochar	Biochar	2/21/2018	MeHg-solid	25.02	0.04149		ng/gdw	0.078	74%	distillation duplicate
PB17-7130	Central	9/18/2017	Bulk solid	W21-UM-Central-B	1	R1.3-Control	Control	2/21/2018	MeHg-solid	11.42	0.06008		ng/gdw	0.043	94%	
PB17-7141	Central	9/18/2017	Bulk solid	W21-UM-Central-B	3	R1.5-Sedimite	Sedimite	2/21/2018	MeHg-solid	9.155	0.04966		ng/gdw	0.068	72%	
PB17-7152	Central	9/18/2017	Bulk solid	W21-UM-Central-B	2	R2.2-Biochar	Biochar	2/21/2018	MeHg-solid	27.86	0.05188		ng/gdw	0.063	74%	
PB17-7163	Central	9/18/2017	Bulk solid	W21-UM-Central-B	1	R2.4-Control	Control	2/21/2018	MeHg-solid	11.15	0.04367		ng/gdw	0.059	95%	
PB17-7174	Central	9/18/2017	Bulk solid	W21-UM-Central-B	3	R2.1-Sedimite	Sedimite	2/21/2018	MeHg-solid	7.778	0.05254		ng/gdw	0.057	84%	
PB17-7185	Central	9/18/2017	Bulk solid	W21-UM-Central-B	2	R3.3-Biochar	Biochar	2/21/2018	MeHg-solid	24.23	0.04523		ng/gdw	0.061	90%	
PB17-7196	Central	9/18/2017	Bulk solid	W21-UM-Central-B	1	R3.2-Control	Control	2/21/2018	MeHg-solid	8.324	0.02917		ng/gdw	0.089	91%	
PB17-7207	Central	9/18/2017	Bulk solid	W21-UM-Central-B	3	R3.4-Sedimite	Sedimite	2/21/2018	MeHg-solid	5.592	0.05296		ng/gdw	0.061	75%	

QC data

Sample Replicates

Sample ID	Analysis Date	Parameter	Value	MDL	Units	ID Recovery
PB17-7042	2/21/2018	MeHg-solid	3.328		0.054 ng/gdw	65%
PB17-7042	2/21/2018	MeHg-solid	3.388		0.045 ng/gdw	73%
%RPD			2%			
PB17-7119	2/21/2018	MeHg-solid	23.91		0.052 ng/gdw	91%
PB17-7119	2/21/2018	MeHg-solid	25.02		0.041 ng/gdw	74%

%RPD

5%

Standard Reference Material

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

Sample ID	Analysis Date	QC Type	Position	Parameter	Method	QC value	QC Nominal	Units	% recovery	MDL	Unit	ID Recovery	Comment
Nist 1566 R1	2/21/2018	CRM		41 MeHg-solid	Distillation	12.74	13.20	ng/gdw	97%		0.03 ng/gdw		87% 4 mLs of distillate analyzed
Nist 1566 R2	2/21/2018	CRM		42 MeHg-solid	Distillation	13.13	13.20	ng/gdw	99%		0.03 ng/gdw		82% 4 mLs of distillate analyzed

Distillation Blanks

Sample ID	Analysis Date	QC Type	Position	Parameter	Method	QC value	Units	MDL	Unit	ID Recovery	Comment
Dist. Blank 1	2/21/2018	Distillation blan		28 MeHg-solid	Distillation	0.72	ng/L		0.14 ng/L		76% 4 mLs of distillate analyzed
Dist. Blank 2	2/21/2018	Distillation blan		29 MeHg-solid	Distillation	0.75	ng/L		0.13 ng/L		82% 4 mLs of distillate analyzed
Dist. Blank 3	2/21/2018	Distillation blan		30 MeHg-solid	Distillation	0.69	ng/L		0.12 ng/L		86% 4 mLs of distillate analyzed
Average						0.72					
Std Dev.						0.03					
% RSD						4%					
DL						0.09 ng/L					

Comparison w/ Eurofins and prior analysis at SERC:

MeHg soils	Eurofins		SERC	RL	10/19/2017		SERC	RL	2/21/2017	
	ng/g	sample weight				sample weight				sample weight
PB17-7097 W21-UM-West-A	8	0.2746		11.9	0.11	0.085		13.49	0.04	0.058
PB17-7119 W21-UM-Central-B	7.6	0.2648		22.3	0.19	0.056		23.91	0.05	0.054
								25.02	0.04	0.078
PB17-7163 W21-UM-Central-B	7	0.2569		10.9	0.17	0.055		11.15	0.04	0.059
PB17-7185 W21-UM-Central-B	7.3	0.2594		26.2	0.16	0.061		24.23	0.05	0.061
PB17-7020 W21-UM-West-A	2.2	0.102		18.4	0.21	0.057		19.44	0.06	0.057
PB17-7075 W21-UM-West-A	2.9	0.177		6.4	0.16	0.068		5.978	0.05	0.057