

Sequential Extraction

Forestry Suppliers, Inc.

1-800-647-5368

#49354 Level Book

Sequential Extraction

Sequential Extraction (Seq. A)

First Week 7-10-06

First Batch (Step 1) 7-10-06:

Volume of extract = 50 ml DDW

Test Tube #	FGS Sample #	Vial + Sed. wt.	Vial wt.	Sample wt.
1	SE1E1A1	7.93	6.87	1.06
2	SE2E1A2	7.96	6.95	1.01
3	SE3E1A3	7.93	6.90	1.03
4	SE4E1A4	7.89	6.90	0.99
5	SE5E1A5	7.90	6.85	1.05
6	SE6E1AP1	8.06	6.97	1.09
7	SE7E1AP2	8.08	6.96	1.12
8	SE8E1Ab1	0	0	0

One bottle 125 ml of DDW
N.B. Acetic starts @ 5:30 PM
shake for 16 hours

speed of shaker = 45

rpm = 3,000 @ 15 min.

2 ml for analysis, remaining acidified
with 0.2 ml HNO₃ (1:1)

Field Sample #

Remarks

✓ 18594-545 1.05 → H Green Label

✓ 18594-637 1.01 → H

✓ 18594-782 1.02 → H

✓ 18594-860 1.01 → S

✓ 18594-954 1.05 O

P1 Dry 1.11 g

P2 hydrated 1.13 g

Blank

First Batch (Step 2) 7-11-06:

Volume of extract = 40 ml Acetic Acid

Test Tube #	FGS Sample #	Vial + Sed. wt.	Vial wt.	Sample wt.
1	SE9E2A1	same	same	same
2	SE10E2A2	"	"	"
3	SE11E2A3	"	"	"
4	SE12E2A4	"	"	"
5	SE13E2A5	"	"	"
6	SE14E2AP1	"	"	"
7	SE15E2AP2	"	"	"
8	SE16E2Ab1	"	"	"

N.B. One bottle 125 ml of 0.1M Acetic Acid for standards

N.B. Hydroxylamine started @ 4:08 PM

Field Sample #	Remarks
Same	<u>Yellow Label</u>
"	
"	
"	
"	
"	
"	
"	
"	Sediments floats on top after centrifugation.
"	

First Batch (Step 4) 7-12-06:

Volume of extract = 100 ml $\text{Na}_4\text{P}_2\text{O}_7$

Test Tube #	FGS Sample #	Vial + Sed. wt.	Vial wt.	Sample wt.
1	SE25E4A1	Same	Same	Same
2	SE26E4A2	"	"	"
3	SE27E4A3	"	"	"
4	SE28E4A4	"	"	"
5	SE29E4A5	"	"	"
6	SE30E4AP1	"	"	"
7	SE31E4AP2	"	"	"
8	SE32E4Ab1	"	"	"

N.B. 2 - 1 hour leach

50 ml @ 1 h

50 ml @ 1 h

Total = 100 ml

Field Sample #

Remarks

Same	<u>Blue Label</u> all samples filtered ↓ yellowish color by regular filter
"	"
"	" papers. Millipore
"	" plugged. for samples
"	" 1-5. P-1, P-2 are
"	" clear liquid (no OM)
"	" Tube # 6 cracked, transferred to new
"	" test tube with little sed. lost.

First Batch (Step 5) 7-13-06:

Volume of extract = 150 ml 6-10% Acids
~~2 or 3 ml of surfactant~~

Test Tube #	FGS Sample #	Vial sed. wt.	Vial wt.	Sample wt.
1	SE33 E5A1	same	same	same
2	SE34 E5A2	"	"	"
3	SE35 E5A3	"	"	"
4	SE36 E5A4	"	"	"
5	SE37 E5A5	"	"	"
6	SE38 E5AP1	"	"	"
7	SE39 E5AP2	"	"	"
8	SE40 E5Ab1	"	"	"

N.B. 1.5 ml Nitric + 1.5 Perchloric
 heat @ 90°C for 1 hour
 after 1 ml remains dilute to
 50 ml with DDW. Repeat. For
 shaker @ 3:41 PM Pyrite.
 2nd ← Use 2.5 ml lead

Field Sample #	Remarks
same	<u>white label</u>
"	
"	
"	
"	
"	
"	lost little seed. Add 2ml of each acid
"	still ppt (needs repeated)
"	" " " "
"	2 Add <u>2ml</u> each acid
"	

7/14/06

Seq. A

Sulfides repeated
for all samples except
pyrite 1.5 ml of
each acid added.

For pyrite 2.5 ml
each acid added.

All diluted to 50 ml
DDW. Combine with
1st extract to make
100 ml in the 125 ml
bottle. 2nd shaking
starts @ 11:15 AM

* schalce for 3 h.

stop @ 2:15

Test Tube #	Filter wt.	Filter + Sed.	Sed. wt.
1	1.57	1.62	0.05 ✓
2	1.54	1.60	0.04 ✓
3	1.57	1.77	0.20 ✓
4	1.55	1.57	0.02 ✓
5	1.53	1.53	0.00 ✓
6	1.57	1.57	0.00 ✓
7	1.54	1.55	0.01 ✓
8	blank		

Sequential Extraction (Seq. B)
Second Week (7-17-06)

Second Batch (Step 1) 7-17-06:

Volume of extract = 50 ml

Native GW

Test Tube #	FGS Sample #	Vial + Sed. wt.	Vial wt.	Sample wt.
1	SE41E1B1	7.89	6.84	1.05
2	SE42E1B2	7.88	6.84	1.04
3	SE43E1B3	7.91	6.87	1.04
4	SE44E1B4	7.92	6.91	1.01
5	SE45E1B5	7.83	6.82	1.01
6	SE46E1BP3	7.98	6.93	1.05
7	SE47E1BP4	7.98	6.93	1.05
8	SE48E1B62			

Acetic acid added @ 5:00 PM

Field Sample #	Remarks
18594 545-547	<u>Green label</u>
18594 637-638	repeated with 1.04 g sample.
18594 782-783	
18594 860-861	600 ml for Step 1
18594 954-955	
P3 Dry	1.05
P4 Hydrated	
Blank	

Second Batch (Step 5) 7-20-06:
 Volume of Extract = 100 ml Acids
 6-10 %

Test Tube #	FGS Sample #	Vial + Seed wt.	Vial wt.	Sample wt.
1	SE73ESB1	Same	Same	Same
2	SE74ESB2	"	"	"
3	SE75ESB3	"	"	"
4	SE76ESB4	"	"	"
5	SE77ESB5	"	"	"
6	SE78ESBP3	"	"	"
7	SE79ESBP4	"	"	"
8	SE80ESB62	"	"	"

started 4:10 PM
 for 16 h
 Stop at 8:10 AM

Field Sample #	Remarks
Same	<u>white label</u>
"	
"	
"	
"	
"	
"	some pyrite left (black) - SEM
"	some pyrite left (black) - SEM
"	

7/20/06

Seq. B

Stop shaking @ 2:00 PM

Test Tube #	Filter wt.	Filter Sed. wt.	Sed. wt.
1	1.56	1.59	0.03 ✓
2	1.57	1.59	0.02 ✓
3	1.53	1.73	0.20 ✓
4	1.56	1.55	- 0.01 ?
5	1.55	1.47	- 0.08 ?
6	1.54	1.63	0.09 ✓
7	1.58	1.61	0.03 ✓
8			

Sequential Extraction (Seq. C)

Third Week (7-24-06)

Third Batch (Step 2) 7-24-06:

Volume of Extract = 40 ml Acetic

Test Tube #	F&S Sample #	Vial + Seal wt.	Vial wt.	Sample wt.
1	SE81E2C1	7.80	6.74	1.06
2	SE82E2C2	7.92	6.92	1.00
3	SE83E2C3	7.73	6.69	1.04
4	SE84E2C4	7.83	6.79	1.04
5	SE85E2C5	7.85	6.77	1.08
6*	SE86E2CP5	8.06	6.96	1.10
7	SE87E2CP6	8.01	7.02	0.99
8	SE88E2C63			

started @ shalco 4:18 PM
End 7-25-06 8:18 AM

Field Sample #	Remarks
18594 545-547	<u>Yellow Label</u>
18594 637-638	
18594 782-783	
18594 860-861	
18594 954-955	
P5	Dry
P6	Hydrated
Blank	

*
Tube broke from bottom
Contaminated ??
lost pyrite wt. ??

Third Batch (Step 3) 7-26-06

Volume of Extract = 40 ml
Hydroxylamine Hydrochloride

Test Tube #	FGS Sample #	Vial + Seed. wt.	Vial wt.	Sample wt.
1	SE89E3C 1	Same	Same	Same
2	SE90E3C 2	"	"	"
3	SE91E3C 3	"	"	"
4	SE92E3C 4	"	"	"
5	SE93E3C 5	"	"	"
6	SE94E3CP5	"	"	"
7	SE95E3CP6	"	"	"
8	SE96E3C b3	"	"	"

started 3:50 PM

End 7:50 AM

[illegible]

Third Batch (Step 4) 7/27/06

Volume of Extract = 100 ml $\text{Na}_4\text{P}_2\text{O}_7$

Test Tube #	FGS Sample #	Vial + Sed. wt.	Vial wt.	Sample wt.
1	SE97E4C 1	Same	Same	Same
2	SE98E4C 2	"	"	"
3	SE99E4C 3	"	"	"
4	SE100E4C 4	"	"	"
5	SE101E4C 5	"	"	"
6	SE102E4C P5	"	"	"
7	SE103E4C PL	"	"	"
8	SE104E4C b3	"	"	"

[illegible]

Third Batch (Step 5) 7-28-06

Volume of Extract = 100 ml

6 - 10 % mixed acids

Test Tube #	FGS Sample #	Vial sed. wt.	Vial wt.	Sample wt	Field Sample #	Remarks
1	SE105E5C 1	Same	Same	Same	Same	<u>white Label</u>
2	SE106E5C 2	"	"	"	"	
3	SE107E5C 3	"	"	"	"	
4	SE108E5C 4	"	"	"	"	
5	SE109E5C 5	"	"	"	"	
6	SE110E5C P5	"	"	"	"	clear after 2 nd extract
7	SE111E5C P6	"	"	"	"	yellow color after 2 nd extract (more sulfides)
8	SE112E5C b3	"	"	"	"	

7/29/06

Seg. C

Test Tube #	Filter wt.	Filter + Sed. wt.	Sed. wt.
1	1.71	1.79	0.08
2	1.66	1.74	0.08
3	1.70	1.95	0.25
4	1.68	1.72	0.04
5	1.70	1.70	0.00
6	1.68	1.68	0.00
7	1.67	1.68	0.01
8	Blank	—	—

Sequential Extraction (Seq. A)
Fourth Week (7-31-06)

Fourth Batch (Step 1) 7/31/06:

Volume of Extract = 50 ml DDW

Test Tube #	FGS Sample #	Vial Sed. wt.	Vial wt.	Sample wt.
1	SE113E1A6	7.92	6.89	1.03
2	SE114E1A7	7.96	6.94	1.02
3	SE115E1A8	8.04	6.94	1.10
4	SE116E1A9	7.90	6.87	1.03
5	SE117E1A10	7.97	6.95	1.02
6	SE118E1A11	7.96	6.88	1.08
7	SE119E1A12	7.90	6.87	1.03
8	SE120E1A12a	7.87	6.85	1.02
9	SE121E1A64			

Field Sample #	Remarks
18255 (580-585)	N ✓ <u>Green label</u>
18255 (686-687)	✓ N
18255 (690-691)	? ✓ N
18463 (643-643.5)	✓ (Hg) H
18256 (798-799)	✓ (Hg) N
18463 (932-933)	✓ N
18464 (556-557)	✓ H
18464 (556-557)	✓ H (same)

Fourth Batch (Step 2) 8-1-06

Volume of Extract = 40 ml Acetic

Started Acetic @ 5:20 PM
on 7/31/06 Stop @ 9:20 AM
8/1/06.

Test Tube #	FGS Sample #	Vial + Sed wt.	Vial wt.	Sample wt.
1	SE122E2A 6	Same	Same	Same
2	SE123E2A 7	"	"	"
3	SE124E2A 8	"	"	"
4	SE125E2A 9	"	"	"
5	SE126E2A 10	"	"	"
6	SE127E2A 11	"	"	"
7	SE128E2A 12	"	"	"
8	SE129E2A 12a	"	"	"
9	SE130E2A 14	"	"	"

Field
Sample #

Remarks

Same

Yellow label

"

"

"

"

"

"

"

"

Hg

Hg

Fourth Batch (Step 3) 8-2-06

Volume of Extract = 40ml Hydrox

Test Tube#	FGS Sample #	Vial Seed wt.	Vial wt.	Sample wt.
1	SE131E3A 6	Same	Same	Same
2	SE132E3A 7	"	"	"
3	SE133E3A 8	"	"	"
4	SE134E3A 9	"	"	"
5	SE135E3A 10	"	"	"
6	SE136E3A 11	"	"	"
7	SE137E3A 12	"	"	"
8	SE138E3A 12a	"	"	"
9	SE139E3A 14	"	"	"

Field
Sample #

Remarks

Same

Red Label

"

"

"

(Hg)

lost 1/2 of extract?

"

(Hg)

"

"

"

"

Fourth Batch (Step 4) 8-2-06

Volume of Extract = 100 ml $\text{Na}_4\text{P}_2\text{O}_7$

Test Tube #	FGS Sample #	Vial + Sed. wt.	Vial wt.	Sample wt.
1	SE140E4A 6	Same	Same	Same
2	SE141E4A 7	"	"	"
3	SE142E4A 8	"	"	"
4	SE143E4A 9	"	"	"
5	SE144E4A 10	"	"	"
6	SE145E4A 11	"	"	"
7	SE146E4A 12	"	"	"
8	SE147E4A 12a	"	"	"
9	SE148E4A 14	"	"	"

N.B. most of the samples are clear after 2nd extract except #4 (high Organic Matter). Its sed. are black color.

Field Sample #	Remarks
Same	Blue label
"	Very clear (low OM) after 2 nd
"	"
"	"
"	(Hig) dirty after 2 nd (high OM).
"	(Hig)
"	"
"	"
"	"
"	"

Fourth Batch (Step 5) 8-3-06

Volume of Extract = 50 ml
8% mixed acids (2ml each)

Test Tube#	FGS Sample #	Vial + sed. wt.	Vial wt.	Sample wt.
1	SE149E5A 6	Same	Same	Same
2	SE150E5A 7	"	"	"
3	SE151E5A 8	"	"	"
4	SE152E5A 9	"	"	"
5	SE153E5A 10	"	"	"
6	SE154E5A 11	"	"	"
7	SE155E5A 12	"	"	"
8	SE156E5A 12a	"	"	"
9	SE157E5A 14	"	"	"

N.B. next will be 1.5 ml each. 6%.
start shaking @ 4:20 PM
stop @ 8:20 AM

Field Sample #	Remarks
Same	<u>white label</u>
"	
"	
"	
"	Hg
"	Hg
"	
"	
"	
"	

Sequential Extraction (Seq. A)

Fifth Week (8/7/06)

Fifth Batch (Step 1) 8-7-06:
Volume of Extract = 50 ml DDW

Test Tube #	FGS Sample #	Vial Sed. wt.	Vial wt.	Sample wt.
1	SE158EIA13	8.03	6.97	1.06
2	SE159EIA14	7.95	6.92	1.03
3	SE160EIA15	7.93	6.90	1.03
4	SE161EIA16	7.87	6.84	1.03
5	SE162EIA17	7.92	6.90	1.02
6	SE163EIA18	7.89	6.88	1.01
7	SE164EIA18a	7.99	6.94	1.05
8	SE165EIA15			

Field Sample #	Remarks
W-18255(800-830)	<u>Green label</u> N
W-18463(1058-1059)	Hg N
W-18256(802-803)	Hg N
W-18720(838-839)	Hg N
W-18720(1028-1029)	Hg N
W-18720(1194-1195)	Hg N
W-18720(1194-1195)	Hg N (duplicate)
Blank	Hg

Fifth Batch (Step 2) 8/8/06

Volume of Extract = 40 ml Acetic

Test Tube #	FGS Sample #	Vial + Soil wt.	Vial wt.	Sample wt.
1	SE166E2A13	Same	Same	Same
2	SE167E2A14	"	"	"
3	SE168E2A15	"	"	"
4	SE169E2A16	"	"	"
5	SE170E2A17	"	"	"
6	SE171E2A18	"	"	"
7	SE172E2A18a	"	"	"
8	SE173E2Ab5	"	"	"

[illegible]

Fifth Batch (Step 3) 8/9/06

Volume of Extract = 40 ml Hydroxy

Test Tube #	FGS Sample #	Vial Seed. wt.	Vial wt.	Sample wt.
1	SE174E3A13	same	same	same
2	SE175E3A14	"	"	"
3	SE176E3A15	"	"	"
4	SE177E3A16	"	"	"
5	SE178E3A17	"	"	"
6	SE179E3A18	"	"	"
7	SE180E3A18a	"	"	"
8	SE181E3A65	"	"	"

Field Sample #	Remarks
same	<u>Red Label</u>
"	Hg -
"	Hg -
"	Hg lost liquid only 1/4 left ??
"	Hg -
"	Hg -
"	Hg
"	Hg

Fifth Batch (Step 4) 8/10/06

Volume of Extract = 60 ml $\text{Na}_2\text{P}_2\text{O}_7$

shake overnight for 16 hrs.
(New Procedure) - leave to settle
for one hour. Increase rps for cent.

Test Tube #	FGS Sample #	Vial + Seal wt.	Vial wt.	Sample wt.
1	SE182E4A 13	same	Same	Same
2	SE183E4A 14	"	"	"
3	SE184E4A 15	"	"	"
4	SE185E4A 16	"	"	"
5	SE186E4A 17	"	"	"
6	SE187E4A 18	"	"	"
7	SE188E4A 18a	"	"	"
8	SE189E4A b5	"	"	"

[illegible]

Fifth Batch (Step 5) 8/11/06

Volume of Extract = 50 ml
(nitric + perchloric 6%)

N.B., 1.5 ml Nitric + 1.5 ml Percl.
dilute to 50 ml with
DDW.

Test Tube #	FGS Sample #	Vial + Seed, wt.	Vial wt.	Sample wt.
1	SE190ESA13	same	same	same
2	SE191ESA14	"	"	"
3	SE192ESA15	"	"	"
4	SE193ESA16	"	"	"
5	SE194ESA17	"	"	"
6	SE195ESA18	"	"	"
7	SE196ESA18a	"	"	"
8	SE197ESA18b	"	"	"

[illegible]

8/11/06

Test T #	filter wt	filter + seed	Seed. wt.
1	1.53	1.50	-0.03
2	1.57	1.53	-0.04
3	1.56	1.62	0.06 ✓
4	1.55	1.52	-0.03
5	1.54	1.51	-0.03
6	1.52	1.49	-0.03
7	1.57	1.53	-0.04

Sequential Extraction (Seq. A)

Sixth Week 8/14/06

Sixth Batch (Step 1) 8/14/06

Volume of Extract = 50 ml DDW

Test Tube #	FGS Sample #	Vial + sed. wt.	Vial wt.	Sample wt.
1	SE198EIA 19	7.92	6.90	1.02
2	SE199EIA 20	7.85	6.82	1.03
3	SE200EIA 21	7.90	6.88	1.02
4	SE201EIA 22	7.91	6.90	1.01
5	SE202EIA 23	7.99	6.95	1.04
6	SE203EIA 24	7.95	6.90	1.05
7	SE204EIA 24a	7.96	6.92	1.04
8	SE205EIA b6			

N.B. W-17001 (616.5-617)
Imp. As = 29 ppm
U = 90 ppm

Field Sample #	Remarks
	<u>Green Label</u>
W-18720 (1330-1331)	N
W-17001 (616.5-617)	Hg → 14
W-17001 (661.5-663)	N
W-17001 (857-859)	N
W-18706 (1144-1159)	N
W-18253 (874-875)	Hg → 75 ppm
W-18253 (874-875)	Hg

Sixth Batch (Step 2) 8-15-06

Volume of Extract = 40 ml Acetic

Test Tube #	FGS Sample #	Vial + Seed wt.	Vial wt.	Sample wt.
1	SE206 E2A 19	Same	Same	Same
2	SE207 E2A 20	"	"	"
3	SE208 E2A 21	"	"	"
4	SE209 E2A 22	"	"	"
5	SE210 E2A 23	"	"	"
6	SE211 E2A 24	"	"	"
7	SE212 E2A 24a	"	"	"
8	SE213 E2A b6	"	"	"

Field
Sample #

Remarks

Yellow Label

Same

"

"

"

"

"

"

"

Hg

lost 3/4 of liquid

Hg

Hg

Sixth Batch (Step 3) 8-16-06

Volume of Extract = 40 ml Hydroxy.

Test Tube #	FGS Sample #	Vial + Seed wt.	Vial wt.	Sample wt.
1	SE214E3A 19	Same	Same	Same
2	SE215E3A 20	"	"	"
3	SE216E3A 21	"	"	"
4	SE217E3A 22	"	"	"
5	SE218E3A 23	"	"	"
6	SE219E3A 24	"	"	"
7	SE220E3A 24a	"	"	"
8	SE221E3A 6	"	"	"

Field Sample #	Remarks
Same	<u>Real Label</u>
"	Hg
"	
"	
"	
"	
"	Hg
"	Hg
"	

Sixth Batch (Step 4) 8-17-06

Volume of Extract = 60 ml $\text{Na}_4\text{P}_2\text{O}_7$

Test Tube #	FGS Sample #	Vial seed wt.	Vial wt.	Sample wt.
1	SE222E4A 19	same	same	same
2	SE223E4A 20	"	"	"
3	SE224E4A 21	"	"	"
4	SE225E4A 22	"	"	"
5	SE226E4A 23	"	"	"
6	SE227E4A 24	"	"	"
7	SE228E4A 24a	"	"	"
8	SE229E4A b 6	"	"	"

Field Sample #	Remarks
	<u>Blue label</u>
same	
"	(Hg) not clear after filtering (High Org.)
"	
"	
"	
"	
"	(Hg)
"	(Hg)
"	

Sixth Batch (Step 5) 8-18-06

Volume of Extract = 50 ml mix acids

Test Tube #	FGS Sample #	Vial + seed wt.	Vial wt.	Sample wt.
1	SE230 E5A 19	same	same	same
2	SE231 E5A 20	"	"	"
3	SE232 E5A 21	"	"	"
4	SE233 E5A 22	"	"	"
5	SE234 E5A 23	"	"	"
6	SE235 E5A 24	"	"	"
7	SE236 E5A 24a	"	"	"
8	SE237 E5A b6	"	"	"

Field Sample #	Remarks
same	<u>White Label</u>
"	Hg
"	
"	
"	
"	
"	
"	Hg
"	Hg
"	

8/18/06

Filter wt.	Filter wt.	Calc. + Sample	Sample wt.
1	1.67	1.72	0.05
2	1.69	2.17	0.48 →
3	1.67	1.72	0.05
4	1.67	1.69	0.02
5	1.68	1.69	0.01
6	1.68	1.73	0.05
7	1.69	1.73	0.04

Sequential Extraction (Seq. A)

Seventh Week 8/21/06

Seventh Batch (Step 1) 8-21-06

Volume of Extract = 50 ml DDW

Test Tube #	FGS Sample #	Vial Sed. wt.	Vial wt.	Sample wt.
1	SE238E1A25	8.02	6.99	1.03
2	SE239E1A26	7.91	6.90	1.01
3	SE240E1A27	7.89	6.84	1.05
4	SE241E1A28	7.98	6.92	1.06
5	SE242E1A29	7.91	6.84	1.07
6	SE243E1A30	7.95	6.92	1.03
7	SE244E1A30a	7.93	6.88	1.05
8	SE245E1A37			

N.B. W-18726 (861-862) ??

As = 23, Mo = 130 ppm

W-18253 (1304-1305) high in

As = 10.4 ppm, Hg = 558 ppm

Field Sample #	Remarks
W-18726 (637-638)	Green Label H
W-18726 (863-864)	N
W-18726 (1201-1202)	N
W-18253 (881-882)	Hg N
W-18253 (1005-1006)	N
W-18253 (1304-1305)	Hg N
W-18253 (1304-1305)	Hg N (dup.)

Seventh Batch (Step 2) 8-22-06

Volume of Extract = 40 ml Acetic Acid

Test Tube #	FGS Sample #	Vial + Seed. wt.	Vial wt.	Sample wt.
1	SE246E2A25	"	"	
2	SE247E2A26	"	"	
3	SE248E2A27	"	"	
4	SE249E2A28	"	"	
5	SE250E2A29	"	"	"
6	SE251E2A30	"	"	"
7	SE252E2A30a	"	"	"
8	SE253E2A67	"	"	"

Field Sample #	Remarks
	<u>Yellow Label</u>
"	
"	
"	
"	
"	Hg
"	
"	
"	Hg
"	
"	Hg
"	

Seventh Batch (Step 3) 8/23/06

Volume of Extract = 40 ml Hydrex

Test Tube #	FGS Sample #	Vial + Sed. wt.	Vial wt.	Sample wt.
1	SE254E3A25	Same	Same	Same
2	SE255E3A26	"	"	"
3	SE256E3A27	"	"	"
4	SE257E3A28	"	"	"
5	SE258E3A29	"	"	"
6	SE259E3A30	"	"	"
7	SE260E3A30a	"	"	"
8	SE261E3A67	"	"	"

Field Sample #	Remarks
Same	<u>Red Label</u>
"	
"	
"	
"	Hg
"	
"	Hg
"	
"	Hg
"	

Seventh Batch (Step 4) 8/24/06

Volume of Extract = 60 ml $\text{Na}_4\text{P}_2\text{O}_5$

Test Tube #	FGS Sample #	Vial std. wt.	Vial wt.	Sample wt.
1	SE262E ₄ A25	Same	Same	Same
2	SE263E ₄ A26	"	"	"
3	SE264E ₄ A27	"	"	"
4	SE265E ₄ A28	"	"	"
5	SE266E ₄ A29	"	"	"
6	SE267E ₄ A30	"	"	"
7	SE268E ₄ A30a	"	"	"
8	SE269E ₄ A67	"	"	"

N.B. Sample #1 black color
in powder indicate too
much Organic matter.
needs to be rerun twice??

Field Sample #	Remarks
Same	Blue label dirty not clear (High OM)
"	
"	
"	
"	Hg
"	
"	Hg
"	
"	Hg
"	

Seventh Batch (Step 5) 8/25/06

Volume of Extract = 50 ml mixed
acids (nitric + perchloric)

Test Tube #	FGS Sample #	Vial + std. wt.	Vial wt.	Sample wt.
1	SE270E5A25	Same	Same	Same
2	SE271E5A26	"	"	"
3	SE272E5A27	"	"	"
4	SE273E5A28	"	"	"
5	SE274E5A29	"	"	"
6	SE275E5A30	"	"	"
7	SE276E5A30a	"	"	"
8	SE277E5A67	"	"	"

Field Sample #	Remarks
Same	<u>White label</u>
"	
"	
"	
"	Hg
"	
"	Hg
"	Hg
"	

8/25/06

Test Tube #	Filter wt.	Filter + Sed.	Sed. wt.
1	1.68	1.84	0.16
2	1.67	1.69	0.02
3	1.70	1.73	0.03
4	1.68	1.72	0.04
5	1.67	1.70	0.03
6	1.69	1.72	0.03
7	1.68	1.70	0.02

Hg Analysis

11 Sample

1 pyrite

3 dupli.

1 Blank

Total = 16

Sequential Extraction (Seq. A)
Eighth Week (8-28-06)

Eighth Batch (Step 1) 8-28-06
Volume of Extract = 50 ml DDW

Test - Tube #	FGS Sample #	Vial + Seed wt.	Vial wt.	Sample wt.
1	SE278E, A31	7.96	6.95	1.01
2	SE279E, A32	8.04	6.95	1.08
3	SE280E, A33	7.98	6.93	1.05
4	SE281E, A34	7.88	6.85	1.03
5	SE282E, A35	7.94	6.87	1.07
6	SE283E, A36	8.01	6.95	1.06
7	SE284E, A36a	7.97	6.89	1.07
8	SE285E, A68			

W-18728(797-798) very high
in U = 29 ppm

Field Sample #	Remarks
W-18725(410-420)	Green Label O ??
W-18725(915-920)	N
W-18728(797-798)	high in U H
W-18728(944-945)	N
W-18728(1289-1290)	N
W-18728(1276-1277)	A
W-18728(1276-1277)	A (repeated)

Eighth Batch (Step 2) 8-29-06

Volume of Extract = 40 ml Acetic.

Test Tube #	FGS Sample #	Vial + Sed wt.	Vial wt.	Sample wt.
1	SE286E ₂ A31	Same	Same	Same
2	SE287E ₂ A32	"	"	"
3	SE288E ₂ A33	"	"	"
4	SE289E ₂ A34	"	"	"
5	SE290E ₂ A35	"	"	"
6	SE291E ₂ A36	"	"	"
7	SE292E ₂ A36a	"	"	"
8	SE293E ₂ Ab8	"	"	"

[illegible]

Eighth Batch (Step 3) 8-30-06

Volume of Extract = 40 ml Hydroxy

Test = Tube #	FGS Sample #	Vial + Seed wt.	Vial wt.	Sample wt.
1	SE294E ₃ A 31	Same	Same	Same
2	SE295E ₃ A 32	"	"	"
3	SE296E ₃ A 33	"	"	"
4	SE297E ₃ A 34	"	"	"
5	SE298E ₃ A 35	"	"	"
6	SE299E ₃ A 36	"	"	"
7	SE300E ₃ A 36a	"	"	"
8	SE301E ₃ A b8	"	"	"

Field Sample #	Remarks
-------------------	---------

Red Label

Same

"

"

"

"

"

"

"

Eighth Batch (Step 4) 8-31-06

Volume of Extract = 68 ml $\text{Na}_4\text{P}_2\text{O}_7$

Test Tube #	FGS Sample #	Vial Std. wt.	Vial wt.	Sample wt.
1	SE302E ₄ A31	same	same	same
2	SE303E ₄ A32	"	"	"
3	SE304E ₄ A33	"	"	"
4	SE305E ₄ A34	"	"	"
5	SE306E ₄ A35	"	"	"
6	SE307E ₄ A36	"	"	"
7	SE308E ₄ A36a	"	"	"
8	SE309E ₄ A68	"	"	"

Field Sample #	Remarks
same	<u>Blue Label</u>
"	
"	
"	
"	
"	~20 ml lost
"	
"	
"	
"	

Eighth Butch (Step 5) 9-1-06

Volume of Extract = 50 ml mixed A.

Test Tube #	FGS Sample #	Vial + seal wt.	Vial wt.	Sample wt.
1	SE310E ₅ A 31	Same	Same	Same
2	SE311E ₅ A 32	"	"	"
3	SE312E ₅ A 33	"	"	"
4	SE313E ₅ A 34	"	"	"
5	SE314E ₅ A 35	"	"	"
6	SE315E ₅ A 36	"	"	"
7	SE316E ₅ A 36a	"	"	"
8	SE317E ₅ A 68	"	"	"

[illegible]

9/11/06

Test Tube#	filter wt.	filter + Sed.	Sed. wt.
1	1.69	1.92	0.23
2	1.69	1.70	0.01
3	1.69	1.86	0.17
4	1.69	1.69	0.00
5	1.71	1.72	0.01
6	1.71	1.71	0.00
7	1.69	1.70	0.01

Sequential Extraction (Seq. A)
Ninth Week 9-4-06

Ninth Batch (Step 1) 9-4-06
Volume of Extract = 50 ml DDW

N.B. SE319 thru SE 324
Orange Co.

Test Tube #	FGS Sample #	Vial sol wt.	Vial wt.	Sample wt.	Field Sample #	Remarks
1	SE318E, A 37	8.07	7.00	1.07	W-18725(910-915)	<u>Green Label</u> N A ??
2	SE319E, A 1	7.93	6.91	1.02	W-18722(1099-1100)	
3	SE320E, A 2	7.95	6.91	1.04	W-18722(1103-1104)	
4	SE321E, A 3	8.01	6.96	1.05	W-18722(1182-1183)	
5	SE322E, A 3a	8.02	6.94	1.08	W-18722(1182-1183)	
6	SE323E, A 4	8.00	6.96	1.04	W-18722(1130.4-1131.3)	
7	SE324E, A 5	7.81	6.73	1.08	W-18722(1209-1210)	
8	SE325E, A 69					

S

Ninth Batch (Step 2) 9-5-06Volume of Extract = 40 ml ^{Acetic A.} ~~Hydroxyl~~

Test Tube #	FGS Sample #	Vial + sod. wt.	Vial wt.	Sample wt.
1	SE326E ₂ A 37	same	same	same
2	SE327E ₂ A 1	"	"	"
3	SE328E ₂ A 2	"	"	"
4	SE329E ₂ A 3	"	"	"
5	SE330E ₂ A 3a	"	"	"
6	SE331E ₂ A 4	"	"	"
7	SE332E ₂ A 5	"	"	"
8	SE333E ₂ A 69	"	"	"

N.B. SE 327 thru SE 332
Orange Co.N.B. leaked 3 samples must be corrected for volume and wt. for only four fractions E₂ → E₃.
Only volume in E₂

Field Sample #	Remarks
same	<u>Yellow Label</u>
"	10 ml left (leaked) lost wt. too ~ 0.4 g
"	10 ml left (leaked) lost wt. too ~ 0.5 g
"	22 ml left (leaked) lost wt. too ~ 0.4 g
"	
"	
"	
"	

Ninth Batch (Step 3) 9-6-06

Volume of Extract = 40 ml Hydroxyl

N.B. SE 335 thru SE 340
Orange Co.

Test Tubett	FGS Sample #	Vinyl + Set wt.	Vinyl wt.	Sample wt.	Field Sample #	Remarks
1	SE334E ₃ A 37	same	Same	Same	Same	<u>Red Label</u>
2	SE335E ₃ A 1	"	"	"	"	
3	SE336E ₃ A 2	"	"	"	"	
4	SE337E ₃ A 3	"	"	"	"	
5	SE338E ₃ A 3a	"	"	"	"	
6	SE339E ₃ A 4	"	"	"	"	
7	SE340E ₃ A 5	"	"	"	"	
8	SE341E ₃ A b9	"	"	"	"	

Ninth Batch (Step 4) 9-7-06

Volume of Extract = 60 ml $\text{Na}_4\text{P}_2\text{O}_7$

Test Tube #	FGS Sample #	Vial + Seed wt.	Vial wt.	Sample wt.
1	SE342E ₄ A 37	same	Same	Same
2	SE343E ₄ A 1	"	"	"
3	SE344E ₄ A 2	"	"	"
4	SE345E ₄ A 3	"	"	"
5	SE346E ₄ A 3a	"	"	"
6	SE347E ₄ A 4	"	"	"
7	SE348E ₄ A 5	"	"	"
8	SE349E ₄ A 69	"	"	"

N.B. SE 343 thru SE 348
Orange Co.

[illegible]

Ninth Batch (Step 5) 9-8-06

Volume of Extract = 50 ml mixed acids

Test Tube #	FGS Sample #	Vial + Seed wt.	Vial wt.	Sample wt.
1	SE350E ₅ A 37	same	same	same
2	SE351E ₅ A 1	"	"	"
3	SE352E ₅ A 2	"	"	"
4	SE353E ₅ A 3	"	"	"
5	SE354E ₅ A 3a	"	"	"
6	SE355E ₅ A 4	"	"	"
7	SE356E ₅ A 5	"	"	"
8	SE357E ₅ A 69	"	"	"

N.B. SE 351 thru SE 356
Orange Co.

Field Sample #	Remarks
Serve	<u>white label</u>
"	
"	
"	
"	
"	
"	
N	
"	
"	

9/8/06

Test Tube #	Sit-r wt.	filter + Sed.	Sed wt.
1	1.70	1.72	0.02
2	1.68	1.70	0.02
3	1.70	1.72	0.02
4	1.68	1.70	0.02
5	1.69	1.71	0.02
6	1.70	1.73	0.03
7	1.70	1.73	0.03

Sequential Extraction (Seq. A) Tenth Week

Tenth Batch (Step 1) 10-23-06
Volume of Extract = 50 ml DDW

Test Tube #	FGS Sample #	Vial sat. wt.	Vial wt.	Sample wt.
1	SE358EIA38	7.88	6.86	1.02
2	SE359EIA39	7.96	6.93	1.03
3	SE360EIA40	7.83	6.82	1.01
370-4	SE361EIA ^X (41)	8.03	6.97	1.06
5	SE362EIA 42 41	7.98	6.9	1.02
6	SE363EIA 43 42	8.02	6.98	1.04
7	SE364EIA 44 43	7.97	6.95	1.02
8	SE365EIA610	—	—	—

Field Sample #	Remarks
W-17001 (739-744)	✓ Green label
W-18706 (1191-1206)	ON
W-18725 (620-630)	A ✓
W-18725 (910-915)	A → ??
W-18725 (980-985)	A
W-18726 (861-862)	O
W-18728 (1040-1050)	A
Blank	

Se

Tenth Batch (Step 2) 10-24-06

Volume of Extract = 40 ml Acetic

Test Tube #	FGS Sample #	Vial Seed wt.	Vial wt.	Sample wt.
1	SE366 E2A38	//	//	//
2	SE367 E2A39	//	//	//
3	SE368 E2A40	//	//	//
4	SE369 E2A (41) 37a	//	//	//
5	SE370 E2A 42 41	//	//	//
6	SE371 E2A 43 42	//	//	//
7	SE372 E2A 44 43	//	//	//
8	SE373 E2A 610			

Field Sample #

Remarks

Yellow label

Same

//

//

//

//

//

//

//

Tenth Batch (Step 3) 10-25-06

Vol. of Extract = 40 ml Hydroxy

Test Tube #	FGS Sample #	Vial + Sed. wt.	Vial wt.	Sample wt.
1	SE374 E3A38	"	"	"
2	SE375 E3A39	"	"	"
3	SE376 E3A40	"	"	"
4	SE377 E3A(41) 37a	"	"	"
5	SE378 E3A42 41	"	"	"
6	SE379 E3A43 42	"	"	"
7	SE380 E3A44 43	"	"	"
8	SE381 E3A45			

Field Sample #	Remarks
	<u>Real Label</u>
Sample	
1	10/10/10
2	10/10/10
3	10/10/10
4	10/10/10
5	10/10/10
6	10/10/10
7	10/10/10
8	10/10/10

Tenth Batch (Step 4) 10-26-06

Vol. of Extract = 60 ml $\text{Na}_4\text{P}_2\text{O}_7$

Test Tube #	FES Sample #	Vial + sept. wt.	Vial wt.	Sample wt.
1	SE382E ₄ A38	"	"	"
2	SE383E ₄ A39	"	"	"
3	SE384E ₄ A40	"	"	"
4	SE385E ₄ A(41)37a	"	"	"
5	SE386E ₄ A42	"	"	"
6	SE387E ₄ A43	"	"	"
7	SE388E ₄ A44	"	"	"
8	SE389E ₄ A45	"	"	"

Field Sample #

Blue label

Same

"

"

"

"

"

"

"

Tenth Batch (Step 5) 10-27-06

Vol. of Extract = 50 ml in HCl acid

Test Tube #	FGS Sample #	Vial + seal wt.	Vial wt.	Sample wt.
1	SE390E ₅ A38	//	//	//
2	SE391E ₅ A39	//	//	//
3	SE392E ₅ A40	//	//	//
4	SE393E ₅ A41	3.72	//	//
5	SE394E ₅ A42	//	//	//
6	SE395E ₅ A43	4.2	//	//
7	SE396E ₅ A44	4.3	//	//
8	SE397E ₅ A610			

[illegible]

10/28/06

Test Tube #	Filter wt.	Filter + seal.	Seal. wt.
1	1.65	1.67	0.02
2	1.70	1.70	—
3	1.67	1.67	—
4	1.68	1.68	—
5	1.69	1.69	—
6	1.69	1.69	—
7	1.70	1.70	—
8			

Sequential Ext. (Seq. A)
Eleventh week

Eleventh Batch (Step 1) 10-30-06
volume of extract = 50 ml DDW

Test Tube #	FGS Sample #	Vial + srad. wt.	Vial wt.	Sample wt.
1	SE398E, A 45 44	8.05	6.94	1.11
2	SE399E, A 46 45	7.90	6.89	1.01
3	SE400E, A 47 46	7.93	6.90	1.03
4	SE401E, A 47a 46a	7.93	6.91	1.02
5	SE402E, A 48 47	7.91	6.90	1.01
6	SE403E, A 49 48			0.50
7	SE404E, A 49a 48a	6.42	5.88	0.54
8	SE405E, A b 11			

N.B. Sample #49 split into two subsamples for duplicates.

Field Sample #	Remarks
W-17986 (1015-1016)	H <u>Green label</u>
W-17986 (1046-1048)	H
W-17986 (1130-1131)	A N
W-17986 (1130-1131)	A (repeated)
W-17986 (1155-1156)	A N
W-17986 (1170-1171)	A N
W-17986 (1170-1171)	A (repeated)
Blank	

10/31/06

Eleventh Butch (Step 2)

Volume of Extract = 40 ml Acetone

Test Tube #	FGS Sample #	Vial + Std wt.	Vial wt.	Super wt.
1	SE406E ₂ A45	Sam	Sam	Sam
2	SE407E ₂ A46	"	"	"
3	SE408E ₂ A47	"	"	"
4	SE409E ₂ A47a	"	"	"
5	SE410E ₂ A48	"	"	"
6	SE411E ₂ A49	"	"	"
7	SE412E ₂ A49a	"	"	"
8	SE413E ₂ A411	"	"	"

N.B.: #2 lost sediments too.

[illegible]

Eleventh Butch (Step 3)

Volume of Extract = 40 ml Hydros.

Test Tube #	FGS Sample #	Vial + Std.	Vial wt.	Sample wt
1	SE414 E ₃ A45	Same	Same	Same
2	SE415 E ₃ A46	/	//	//
3	SE416 E ₃ A47	/	//	//
4	SE417 E ₃ A47a	/	//	/
5	SE418 E ₃ A48	/	//	//
6	SE419 E ₃ A49	/	//	//
7	SE420 E ₃ A49a	/	//	//
8	SE421 E ₃ A411	/	//	//

Field Sample #	Remarks
Sonne	<u>Red Label</u>
--	
--	
-~	
-r	
-r	
-r	
-r	
-r	

11/2/06

Eleventh Batch (Step 4)

Volume of Extract = 60 ml $\text{Na}_4\text{P}_2\text{O}_7$

Test Tube XX	FGS Sample #	vial Std wt.	vial wt.	Sample wt
1	SE422 E ₄ A45	Same	Same	Same
2	SE423 E ₄ A46	"	"	"
3	SE424 E ₄ A47	"	"	"
4	SE425 E ₄ A47a	"	"	"
5	SE426 E ₄ A48	"	"	"
6	SE427 E ₄ A49	"	"	"
7	SE428 E ₄ A49a	"	"	"
8	SE429 E ₄ A411	"	"	"

[illegible]

11/3/06

Eleventh Batch (Step 5)

Vol. of Extract = 50 ml mixed acids

Test Tube #	FGS Sample #	viol + suct. wt.	U/ul wt.	Sample wt.
1	SE430 ₅ EA45	Same	Same	Same
2	SE431 ₅ EA46	"	"	"
3	SE432 ₅ EA47	"	"	"
4	SE433 ₅ EA47a	"	"	"
5	SE434 ₅ EA48	"	"	"
6	SE435 ₅ EA49	"	"	"
7	SE436 ₅ EA49a	"	"	"
8	SE437 ₅ EA49b	"	"	"

Field
Sample #

Remarks

white label

Same

"

"

"

"

"

"

"

11/4/06

① ex. $g \perp p. = 0.01$

② " " = 0.92

③ $\cup \cap \setminus = \emptyset$

④ $\therefore \sim 100$

$\textcircled{3} \quad \sim \quad \sim \quad = \quad \infty$

(6) $\text{r} \quad \text{r} \quad = \quad \text{oo}$

③ 1 1 = 0 0

$$\text{wf. of } P_{\text{inter}} = 1.63$$

