

Test Report

Report No.: U05101210114920E

Query Password: QW5134

Date: Jan. 20, 2021

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Applicant: Shenzhen Century Xinyang Tech Co., Ltd**Contact information:** 3F, North Building, Bantian High-tech industrial Zone, No. 2 of Bell Road, Longgang, Shenzhen, Guangdong**The following sample(s) was (were) submitted and identified by client as:**

Sample Name : 1200M Repeater
Model No. : WD-R1206U, WD-R1205U
Sample Received Date : Jan. 15, 2021
Testing Period : From Jan. 15, 2021 to Jan. 20, 2021
Test Request : Please refer to next page(s).
Test Result(s) : Please refer to next page(s).

Signed for and on behalf of Shen Zhen UONE Test Co., LTD.

Prepared by



Marcia Deng

Checked by



Nora Deng

Approved by



Levent Liang

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Summary of test results:**TEST REQUEST**

RoHS Directive 2011/65/EU and its subsequent amendments & Directive (EU) 2015/863

To determine Lead (Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)),

(1) Polybrominated Biphenyls (PBBs) and Polybrominated DiphenylEthers (PBDEs)
content by screening test and chemical test

(2) To determine Phthalates (DBP, BBP, DEHP, DIBP) content by chemical test

CONCLUSION**PASS****PASS**

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Test Material List

Material No.	Description (Location)	Photo(s) of tested materials
1	Silvery metal(screw)	
2	Silvery metal with black coating(screw)	
3	White plastic(button)	
4	Transparent plastic(sheet)	
5	White/black adhesive plastic(label)	
6	White plastic(shell)	
7	Silvery metal(pin)	
8	Red soft plastic(wire jacket)	
9	Black soft plastic(wire jacket)	
10	Silvery metal(wire)	
11	White plastic(shell)	
12	Black soft plastic(wire jacket)	
13	Silvery metal(shield)	
14	Transparent soft plastic(interlayer)	
15	Silvery metal(wire)	
16	Green PCB	
17	Silvery solder(PCB)	
18	Grey soft plastic(wire jacket)	
19	Golden metal(antenna plug)	
20	Red soft plastic(wire jacket)	
21	Black soft plastic(wire jacket)	
22	Yellow adhesive plastic(tape, transformer)	
23	Black plastic(bobbin, transformer)	
24	Black magnet(core, transformer)	
25	Copper metal(coil, transformer)	
26	Copper metal with yellow coating(coil, transformer)	
27	Green body(inductor, PCB)	

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Material No.	Description (Location)	Photo(s) of tested materials
28	Black plastic with white printing(sleeve, capacitor)	
29	Silvery metal(shell, capacitor)	
30	Black soft rubber(base, capacitor)	
31	Brown paper with liquid(film, capacitor)	
32	Silvery metal(foil, capacitor)	
33	Dull silvery metal(foil, capacitor)	
34	Silvery metal(pin, capacitor)	
35	Grey body(fuse, PCB)	
36	Black body(diode, PCB)	
37	Blue body(capacitor, PCB)	
38	Silvery metal(connector, PCB)	
39	Black body(IC, PCB)	
40	Brown body(capacitor, PCB)	
41	Black body(resistor, PCB)	
42	Black PCB	
43	Silvery solder(PCB)	
44	Silvery metal(shell, socket)	
45	Black plastic(pin holder, socket)	
46	Silvery metal(pin, socket)	
47	Black plastic(button, switch)	
48	Silvery metal(cover, switch)	
49	Silvery metal(foil, switch)	
50	Black plastic(base, switch)	
51	Silvery metal(connector, switch)	
52	Black body(IC, PCB)	
53	Grey body(inductor, PCB)	
54	Golden metal(antenna socket)	
55	Silvery body(crystal, PCB)	

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Material No.	Description (Location)	Photo(s) of tested materials
56	Grey silicone(radiator, PCB)	
57	Silvery solder(PCB)	
58	White body(LED, PCB)	
59	Green PCB	
60	Black plastic(shell)	
61	Silvery metal(pin)	
62	Black plastic(shell)	
63	White adhesive paper(label)	
64	Black plastic(button)	

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Test Result(s):

(1) Lead (Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyls (PBBs) and Polybrominated DiphenylEthers (PBDEs)

Test Method: IEC62321-3-1: 2013, IEC62321-4: 2013+A1:2017, IEC62321-5: 2013, IEC62321-6: 2015, IEC 62321-7-1:2015, IEC 62321-7-2: 2017, analyzed by EDXRF & ICP-OES & GC-MS & UV-Vis.

No.	EDXRF Result ⁽¹⁾					Chemical Result ⁽²⁾ (mg/kg)	Remark ⁽³⁾	Conclusion
	Pb	Cd	Hg	Cr	Br			
1	BL	BL	BL	BL	BL	—	—	PASS
2	BL	BL	BL	BL	BL	—	—	PASS
3	BL	BL	BL	BL	BL	—	—	PASS
4	BL	BL	BL	BL	BL	—	—	PASS
5	BL	BL	BL	BL	BL	—	—	PASS
6	BL	BL	BL	BL	BL	—	—	PASS
7	BL	BL	BL	BL	BL	—	—	PASS
8	BL	BL	BL	BL	BL	—	—	PASS
9	BL	BL	BL	BL	BL	—	—	PASS
10	BL	BL	BL	BL	BL	—	—	PASS
11	BL	BL	BL	BL	BL	—	—	PASS
12	BL	BL	BL	BL	BL	—	—	PASS
13	BL	BL	BL	BL	BL	—	—	PASS
14	BL	BL	BL	BL	BL	—	—	PASS
15	BL	BL	BL	BL	BL	—	—	PASS
16	BL	BL	BL	BL	BL	—	—	PASS
17	BL	BL	BL	BL	BL	—	—	PASS
18	BL	BL	BL	BL	BL	—	—	PASS
19	BL	BL	BL	BL	BL	—	—	PASS
20	BL	BL	BL	BL	BL	—	—	PASS
21	BL	BL	BL	BL	BL	—	—	PASS
22	BL	BL	BL	BL	BL	—	—	PASS
23	BL	BL	BL	BL	BL	—	—	PASS

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No.	EDXRF Result ⁽¹⁾					Chemical Result ⁽²⁾ (mg/kg)	Remark ⁽³⁾	Conclusion
	Pb	Cd	Hg	Cr	Br			
24	BL	BL	BL	BL	BL	—	—	PASS
25	BL	BL	BL	BL	BL	—	—	PASS
26	BL	BL	BL	BL	BL	—	—	PASS
27	BL	BL	BL	BL	BL	—	—	PASS
28	BL	BL	BL	BL	BL	—	—	PASS
29	BL	BL	BL	BL	BL	—	—	PASS
30	BL	BL	BL	BL	BL	—	—	PASS
31	BL	BL	BL	BL	BL	—	—	PASS
32	BL	BL	BL	BL	BL	—	—	PASS
33	BL	BL	BL	BL	BL	—	—	PASS
34	BL	BL	BL	BL	BL	—	—	PASS
35	BL	BL	BL	BL	BL	—	—	PASS
36	BL	BL	BL	BL	BL	—	—	PASS
37	BL	BL	BL	BL	BL	—	—	PASS
38	BL	BL	BL	BL	BL	—	—	PASS
39	BL	BL	BL	BL	BL	—	—	PASS
40	BL	BL	BL	BL	BL	—	—	PASS
41	BL	BL	BL	BL	BL	—	—	PASS
42	BL	BL	BL	BL	BL	—	—	PASS
43	BL	BL	BL	BL	BL	—	—	PASS
44	BL	BL	BL	BL	BL	—	—	PASS
45	BL	BL	BL	BL	BL	—	—	PASS
46	BL	BL	BL	BL	BL	—	—	PASS
47	BL	BL	BL	BL	BL	—	—	PASS
48	BL	BL	BL	BL	BL	—	—	PASS
49	BL	BL	BL	BL	BL	—	—	PASS
50	BL	BL	BL	BL	BL	—	—	PASS

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No.	EDXRF Result ⁽¹⁾					Chemical Result ⁽²⁾ (mg/kg)	Remark ⁽³⁾	Conclusion
	Pb	Cd	Hg	Cr	Br			
51	BL	BL	BL	BL	BL	—	—	PASS
52	BL	BL	BL	BL	BL	—	—	PASS
53	BL	BL	BL	BL	BL	—	—	PASS
54	BL	BL	BL	BL	BL	—	—	PASS
55	BL	BL	BL	BL	BL	—	—	PASS
56	BL	BL	BL	BL	BL	—	—	PASS
57	BL	BL	BL	BL	BL	—	—	PASS
58	BL	BL	BL	BL	BL	—	—	PASS
59	BL	BL	BL	BL	BL	—	—	PASS
60	BL	BL	BL	BL	BL	—	—	PASS
61	BL	BL	BL	BL	BL	—	—	PASS
62	BL	BL	BL	BL	BL	—	—	PASS
63	BL	BL	BL	BL	BL	—	—	PASS
64	BL	BL	BL	BL	BL	—	—	PASS

Remark:

(1) ①Results are obtained by EDXRF for primary screening, and further wet chemical testing by ICP-OES (for Cd, Pb, Hg), UV-VIS (for Cr(VI)) and GC/MS (for PBBs, PBDEs) is recommended to be performed, if an inconclusive result was found (as "X" in below table) (unit: mg/kg).

②OL = Over Limit, BL = Below Limit, X = Inconclusive, NA = Not Applicable.

③The EDXRF screening test for RoHS elements – The reading may be different to the actual content in the sample be of non-uniformity composition.

Element	Polymer	Metal	Composite Materials
Cd	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$LOD < X < (150+3\sigma) \leq OL$
Pb	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Hg	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Br	$BL \leq (300-3\sigma) < X$	NA	$BL \leq (250-3\sigma) < X$
Cr	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$

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Units and limits in EU RoHS Directive 2011/65/EU:

Element	Pb	Cd	Hg	Cr(VI)	PBBs(single)	PBDEs(single)
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Limit	1000	100	1000	1000	1000	1000

(2) ① mg/kg = ppm = 0.0001%, N.D. = Not Detected (Less than MDL).

② Unit and MDL (Method detection limit) in wet chemical test.

Element	Pb	Cd	Hg	Cr(VI)	PBBs(single)	PBDEs(single)
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MDL	2	2	2	8	5	5

③ According to IEC 62321-7-1:2015, result on Cr(VI) for metal sample is shown as Positive/Negative.

Negative = Absence of Cr(VI) coating, Positive = Presence of Cr(VI) coating.

Storage condition and production date of the tested sample are unavailable and thus results of Cr(VI) represent status of the sample at the time of testing.

④ According to IEC 62321-3-1:2013, this column represents the results of wet chem test.

(3) This column represents the exempted decoration of material or other related testing sample's information.

(2) Phthalates (DBP, BBP, DEHP, DIBP) content

Test Method: IEC 62321-8: 2017, analyzed by gas chromatographic- mass spectrometer (GC-MS).

Substances	DBP	BBP	DEHP	DIBP	Conclusion
CAS No.	84-74-2	85-68-7	117-81-7	84-69-5	
Limit (mg/kg)	1000	1000	1000	1000	
MDL (mg/kg)	30	30	30	30	
Material No.	Result (mg/kg)				
1	N.D.	N.D.	N.D.	N.D.	PASS
2	N.D.	N.D.	N.D.	N.D.	PASS
3	N.D.	N.D.	N.D.	N.D.	PASS
4	N.D.	N.D.	N.D.	N.D.	PASS
5	N.D.	N.D.	N.D.	N.D.	PASS
6	N.D.	N.D.	N.D.	N.D.	PASS
7	N.D.	N.D.	750	N.D.	PASS

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Substances	DBP	BBP	DEHP	DIBP	Conclusion
CAS No.	84-74-2	85-68-7	117-81-7	84-69-5	
Limit (mg/kg)	1000	1000	1000	1000	
MDL (mg/kg)	30	30	30	30	
Material No.	Result (mg/kg)				
8	N.D.	N.D.	N.D.	N.D.	
9	N.D.	N.D.	N.D.	N.D.	
10	N.D.	N.D.	N.D.	N.D.	
11	N.D.	N.D.	N.D.	N.D.	
12	N.D.	N.D.	348	N.D.	
13	N.D.	N.D.	N.D.	N.D.	
14	N.D.	N.D.	N.D.	N.D.	
15	N.D.	N.D.	N.D.	N.D.	
16	N.D.	N.D.	N.D.	N.D.	
17	N.D.	N.D.	N.D.	N.D.	
18	N.D.	N.D.	N.D.	N.D.	
19	N.D.	N.D.	N.D.	N.D.	
20	N.D.	N.D.	N.D.	N.D.	
21	N.D.	N.D.	N.D.	N.D.	
22	N.D.	N.D.	N.D.	N.D.	
23	N.D.	N.D.	N.D.	N.D.	
24	N.D.	N.D.	N.D.	N.D.	
25	N.D.	N.D.	N.D.	N.D.	
26	N.D.	N.D.	N.D.	N.D.	
27	N.D.	N.D.	N.D.	N.D.	
28	N.D.	N.D.	N.D.	N.D.	
29	N.D.	N.D.	N.D.	N.D.	
30	N.D.	N.D.	N.D.	N.D.	
31	N.D.	N.D.	N.D.	N.D.	

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Substances	DBP	BBP	DEHP	DIBP	Conclusion
CAS No.	84-74-2	85-68-7	117-81-7	84-69-5	
Limit (mg/kg)	1000	1000	1000	1000	
MDL (mg/kg)	30	30	30	30	
Material No.	Result (mg/kg)				Conclusion
32	N.D.	N.D.	N.D.	N.D.	
33	N.D.	N.D.	N.D.	N.D.	
34	N.D.	N.D.	N.D.	N.D.	
35	N.D.	N.D.	N.D.	N.D.	
36	N.D.	N.D.	N.D.	N.D.	
37	N.D.	N.D.	N.D.	N.D.	
38	N.D.	N.D.	N.D.	N.D.	
39	N.D.	N.D.	N.D.	N.D.	
40	N.D.	N.D.	N.D.	N.D.	
41	N.D.	N.D.	N.D.	N.D.	
42	N.D.	N.D.	N.D.	N.D.	
43	N.D.	N.D.	N.D.	N.D.	
44	N.D.	N.D.	N.D.	N.D.	
45	N.D.	N.D.	N.D.	N.D.	
46	N.D.	N.D.	N.D.	N.D.	
47	N.D.	N.D.	N.D.	N.D.	
48	N.D.	N.D.	N.D.	N.D.	
49	N.D.	N.D.	N.D.	N.D.	
50	N.D.	N.D.	N.D.	N.D.	
51	N.D.	N.D.	N.D.	N.D.	
52	N.D.	N.D.	N.D.	N.D.	
53	N.D.	N.D.	N.D.	N.D.	
54	N.D.	N.D.	N.D.	N.D.	
55	N.D.	N.D.	N.D.	N.D.	

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Substances	DBP	BBP	DEHP	DIBP	Conclusion
CAS No.	84-74-2	85-68-7	117-81-7	84-69-5	
Limit (mg/kg)	1000	1000	1000	1000	
MDL (mg/kg)	30	30	30	30	
Material No.	Result (mg/kg)				
56	N.D.	N.D.	N.D.	N.D.	PASS
57	N.D.	N.D.	N.D.	N.D.	PASS
58	N.D.	N.D.	N.D.	N.D.	PASS
59	N.D.	N.D.	N.D.	N.D.	PASS
60	N.D.	N.D.	N.D.	N.D.	PASS
61	N.D.	N.D.	N.D.	N.D.	PASS
62	N.D.	N.D.	N.D.	N.D.	PASS
63	N.D.	N.D.	N.D.	N.D.	PASS
64	N.D.	N.D.	N.D.	N.D.	PASS

- Note:**
1. mg/kg = milligram per kilogram (ppm).
 2. MDL= method detection limit.
 3. N.D.=not detected(less than MDL).

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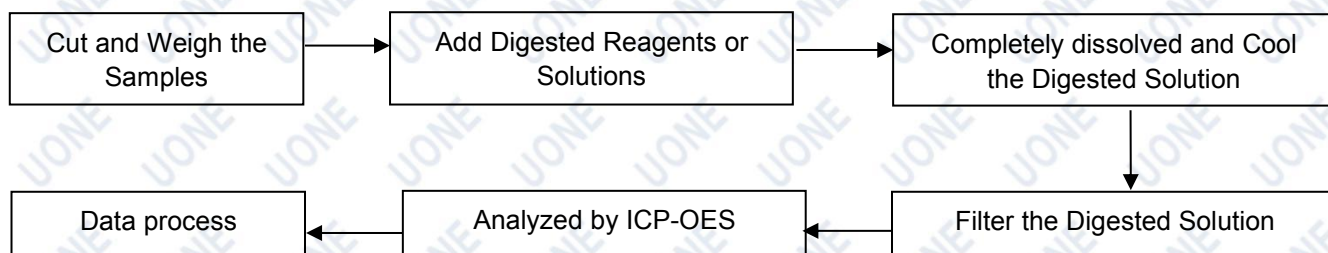
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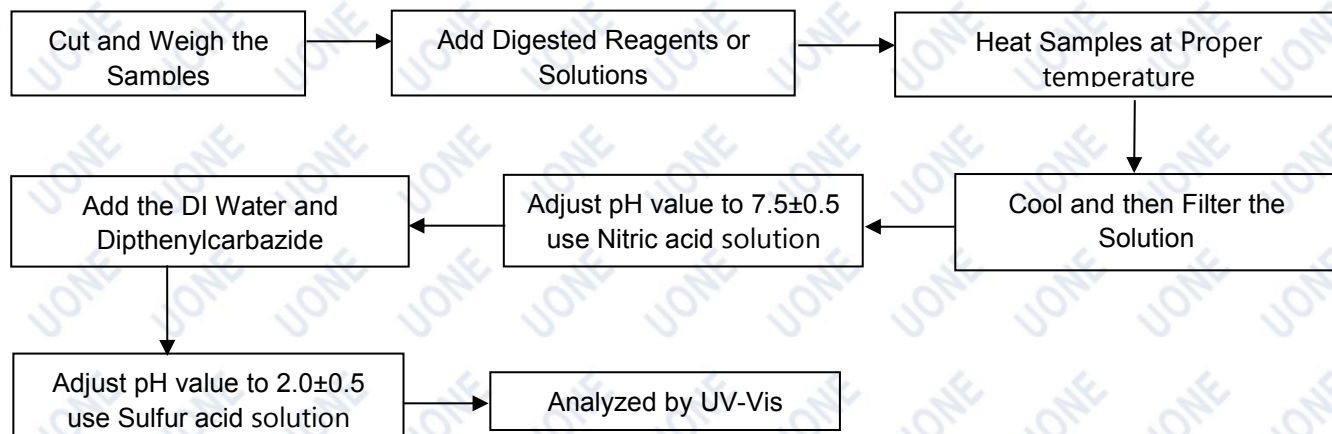
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Test Process Flow

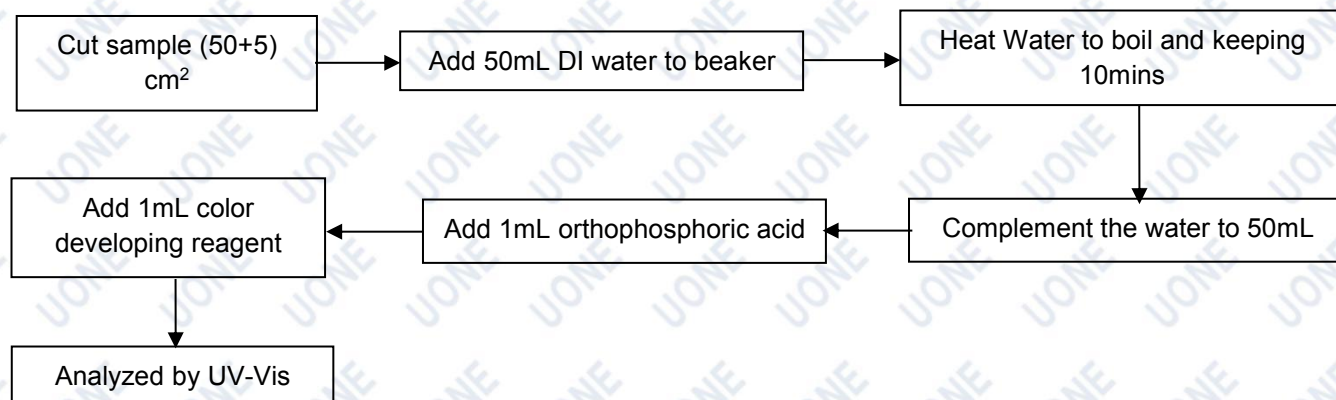
1. Lead, Cadmium, Mercury



2. Hexavalent Chromium (Non-metal)



Hexavalent Chromium (Metal)



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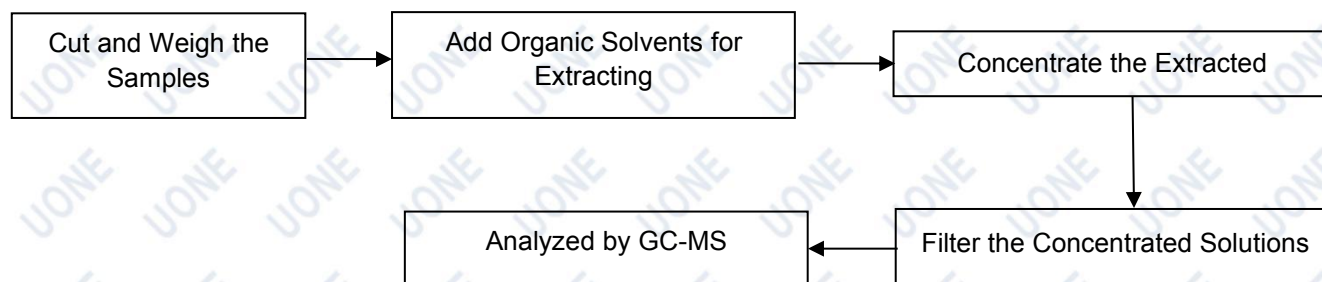
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Test Process Flow (Continued):

3. PBBs & PBDEs, Phthalates

**Photo(s) of Sample:*******End of Report*****

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