



中国认可
国际互认
检测
TESTING
CNAS L4062



TEST REPORT

Report No. : WTH21X09100048C

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Applicant..... : Xiaogan Yisheng New Material Co., Ltd.
Applicant Address..... : Xinhua Road, Xiaonan Economic Development Zone, Xiaogan City, Hubei Province Esun New Materials Co., Ltd.
Manufacturer..... : Xiaogan Yisheng New Material Co., Ltd.
Manufacturer Address..... : Xinhua Road, Xiaonan Economic Development Zone, Xiaogan City, Hubei Province Esun New Materials Co., Ltd.
Date of Receipt Sample.. : Sep.22, 2021
Testing Period..... : Sep.22, 2021 to Sep.26, 2021
Date of Issue..... : Sep.26, 2021
Test Requested..... : In accordance with the RoHS Directive 2011/65/EU and its amendment (EU) No. 2015/863, to determine the 10 restricted substances content in the submitted sample.
Test Conclusion..... : **Pass** (Based on the performed tests on the submitted samples, the results comply with the requirement of EU RoHS Directive 2011/65/EU and its amendment (EU) No. 2015/863).

*****FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S) *****



Signed for and on behalf of
Waltek Testing Group (Shenzhen) Co., Ltd.
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Tested by:

Lee Li

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Reviewed by:

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Approved by:

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Declaration: The results shown in this test report refer only to the sample(s) tested; this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be considered invalidated without specific seal for test institute and the signatures of compiler and approver.



Sample Name..... : eSilk-PLA filament

Model No. : N/A

Reference Model No. : N/A

Brand..... : N/A

Test Method:

- IEC 62321-4:2013/AMD1:2017 for mercury (Hg), analyzed by ICP-OES
- IEC 62321-5:2013 for lead (Pb) and cadmium (Cd), analyzed by ICP-OES
- IEC 62321-7-2:2017 and/or IEC 62321-7-1:2015 for hexavalent chromium (Cr⁶⁺), analyzed by UV-VIS
- IEC 62321-6:2015 for PBBs and PBDEs, analyzed by GC-MS
- IEC 62321-8:2017 for phthalates, analyzed by GC-MS

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**RoHS hazardous substances test**

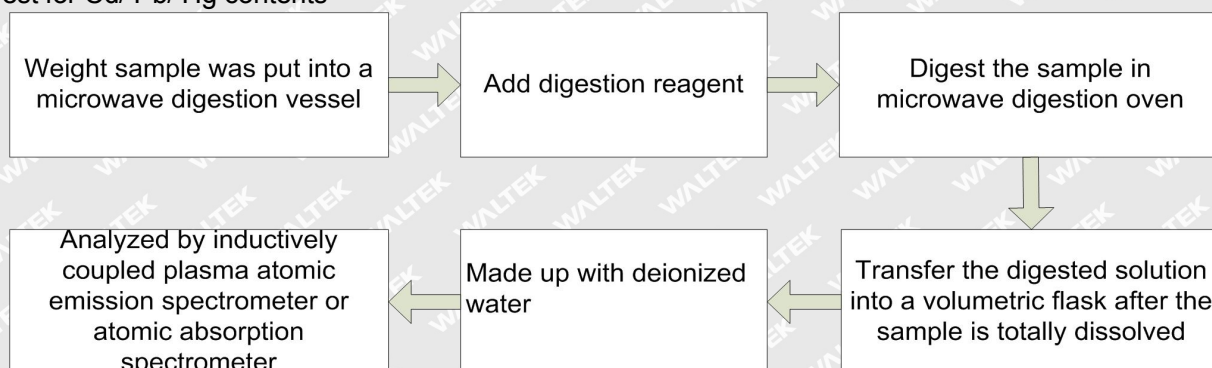
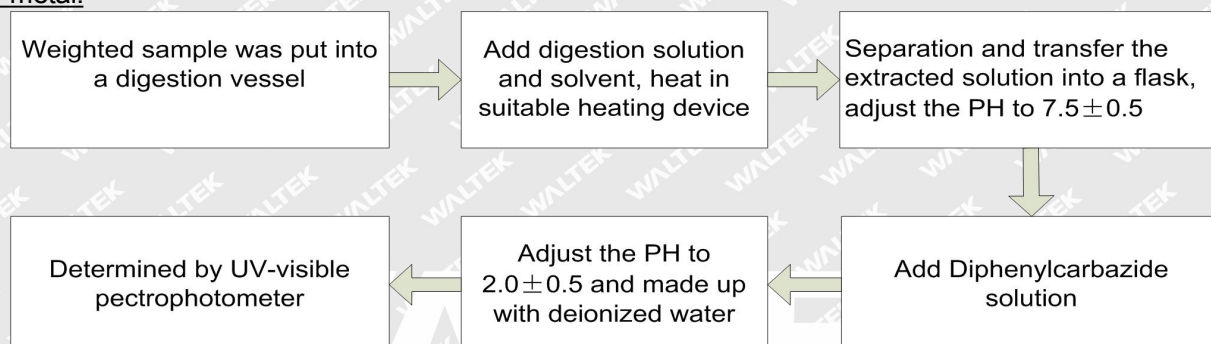
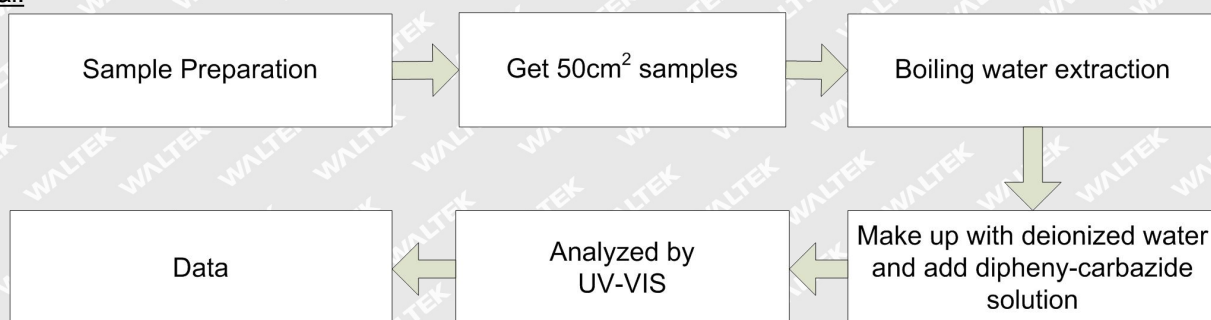
Test Item(s)		Result (mg/kg)	Limit (mg/kg)
		Red plastic (eSilk-PLA)	
1	Lead (Pb)	ND	1000
2	Cadmium (Cd)	ND	100
3	Mercury (Hg)	ND	1000
4	Hexavalent Chromium (Cr ⁶⁺)	ND	1000
5	Mono-PBB	ND	--
	Di-PBB	ND	--
	Tri-PBB	ND	--
	Tetra-PBB	ND	--
	Penta-PBB	ND	--
	Hexa-PBB	ND	--
	Hepta-PBB	ND	--
	Octa-PBB	ND	--
	Nona-PBB	ND	--
	Deca-PBB	ND	--
Sum of PBBs		ND	1000
6	Mono-PBDE	ND	--
	Di- PBDE	ND	--
	Tri- PBDE	ND	--
	Tetra- PBDE	ND	--
	Penta- PBDE	ND	--
	Hexa- PBDE	ND	--
	Hepta- PBDE	ND	--
	Octa- PBDE	ND	--
	Nona- PBDE	ND	--
	Deca- PBDE	ND	--
Sum of PBDEs		ND	1000
7	Bis (2-ethylhexyl) phthalate (DEHP)	ND	1000
8	Benzyl butyl phthalate (BBP)	ND	1000
9	Dibutyl phthalate (DBP)	ND	1000
10	Diisobutyl phthalate(DIBP)	ND	1000
Conclusion		PASS	--



Remark:

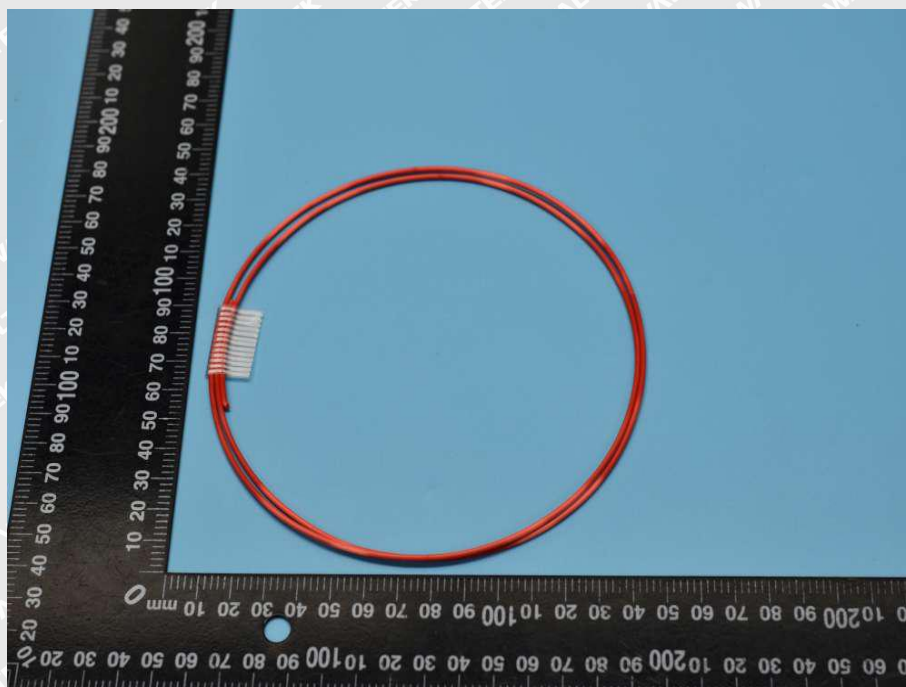
1. mg/kg = milligram per kilogram = ppm.
2. ND = not detected or lower than method detection limit.
3. "--" =Not regulated.
4. Method Detection Limit (MDL) :10mg/kg for Pb, Cd, Hg and Cr⁶⁺; 10mg/kg for PBB and PBDE; 50mg/kg for each of phthalate.
5. Negative = The Cr⁶⁺ concentration is below the limit of quantification. The coating is considered a non- Cr⁶⁺ based coating.
6. Positive = The Cr⁶⁺ concentration is above the limit of quantification and the statistical margin of error, The sample coating is considered to contain Cr⁶⁺.
7. Information on storage conditions and production date of the tested sample is unavailable and thus Cr⁶⁺ results represent status of the sample at the time of testing.
8. Requirement as per RoHS Directive 2011/65/EU and its amendment (EU) No. 2015/863

Test Item(s)	Limit (mg/kg)
Lead (Pb)	1000
Cadmium (Cd)	100
Mercury (Hg)	1000
Hexavalent chromium (Cr(VI))	1000
Polybrominated biphenyls (PBBs)	1000
Polybrominated diphenyl ethers (PBDEs)	1000
Bis (2-ethylhexyl)- phthalate (DEHP)	1000
Dibutyl phthalate (DBP)	1000
Benzylbutyl phthalate (BBP)	1000
Diisobutyl phthalate (DIBP)	1000

**Testing Flow chart:****1. Test for Cd/ Pb/ Hg contents****2. Test for Cr⁶⁺ content****Non-metal:****Metal:****3. Test for PBBs/ PBDEs/ DIBP/ DEHP/ DBP/ BBP contents**



Sample Photo :



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Photograph of parts tested :



==== End of Report =====

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