



Test Report

Report No. A2240475125101002R1

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Company Name NAN YA ELECTRONIC MATERIALS(KUNSHAN)CORP.,LTD
shown on Report
Address 201 CHANG JIANG ROAD(S)KUNSHAN ECONOMIC&TECHNICAL
DEVELOPMENT ZONE,JIANG SU.CHINA

The following sample(s) and sample information was/were submitted and identified by/on the behalf of the applicant

Sample Name(s)	Electrolytic copper foil
Color	Red copper
Material	Metal
Sample Received Date	Aug. 8, 2024
Testing Period	Aug. 8, 2024 to Aug. 16, 2024

Test Requested As specified by client, to test Phosphate(s), Total Arsenic(As), Beryllium(Be), Antimony(Sb), Mercury (Hg), Hexabromocyclododecane (HBCDD), Fluorine (F), Chlorine (Cl), Bromine (Br), Iodine (I), Tetrabromobisphenol A (TBBP-A), Bisphenol A (BPA), Organotin compounds,Phthalates, Perfluorooctanoic Acid(PFOA), Perfluorooctane Sulfonates(PFOS), Tetrachlorethylene,Pentachlorophenol in the submitted sample(s).

Test Method/Test Result(s) Please refer to the following page(s).



Approved by

Chen kaimin
Lab Manager

Date

Oct. 11, 2024

No. J587851448

Centre Testing International Pinbiao(Shanghai) Co., Ltd.

No.1351, Wanfang Road, Minhang District, Shanghai, China

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Test Method

Tested Item(s)	Test Method	Measured Equipment(s)
Phosphate(s)	Refer to US EPA 3550C:2007 & US EPA 8270E:2018*	GC-MS
Total Arsenic(As)	Refer to US EPA 3052:1996 & US EPA 6010D:2018*	ICP-OES
Beryllium(Be)	Refer to US EPA 3050B:1996 & US EPA 6010D:2018*	ICP-OES
Antimony(Sb)	Refer to US EPA 3050B:1996 & US EPA 6010D:2018*	ICP-OES
Mercury (Hg)	Refer to US EPA 3050B:1996 & US EPA 6010D:2018*	ICP-OES
Hexabromocyclododecane (HBCDD)	IEC 62321-9:2021	GC-MS
Fluorine (F)	Refer to EN 14582:2016	IC
Chlorine (Cl)	Refer to EN 14582:2016	IC
Bromine (Br)	Refer to EN 14582:2016	IC
Iodine (I)	Refer to EN 14582:2016	IC
Tetrabromobisphenol A (TBBP-A)	Refer to US EPA 3550C:2007 & US EPA 8321B:2007*	LC-MS-MS/LC-MS
Bisphenol A (BPA)	Refer to US EPA 3550C:2007 & US EPA 8321B:2007*	LC-MS-MS/LC-MS
Organotin compounds	Refer to US EPA 3550C:2007 & ISO 17353:2004*	GC-MS
Phthalates	Refer to EN 14372:2004(E) *	GC-MS
Perfluorooctanoic Acid(PFOA)	CEN/TS 15968:2010*	LC-MS-MS/ LC-MS
Perfluorooctane Sulfonates(PFOS)	CEN/TS 15968:2010*	LC-MS-MS/ LC-MS
Tetrachlorethylene	Refer to US EPA 5021A:2014*	GC-MS
Pentachlorophenol	Refer to ISO 17070:2015*	GC-MS

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Test Result(s)

Tested Item(s)	Result	MDL
	002	
Phosphate(s)		
Tris(2,3-dibromopropyl) phosphate (TDBPP/TRIS)	N.D.	5 mg/kg
Triphenyl phosphate (TPP)	N.D.	5 mg/kg
Tris(2-chloroethyl) phosphate (TCEP)	N.D.	5 mg/kg
Tris(1-aziridinyl)phosphine oxide (TEPAO)	N.D.	5 mg/kg
Tributyl phosphate (TBP)	N.D.	5 mg/kg
Tri-m-cresyl phosphate (TmCP)	N.D.	5 mg/kg
Tris(2-ethylhexyl) phosphate (TEHP)	N.D.	5 mg/kg
Trimethyl phosphate (TMP)	N.D.	5 mg/kg
Triethyl phosphate (TEP)	N.D.	5 mg/kg
Trixylenyl phosphate (TXP)	N.D.	5 mg/kg
Tris(2-chloropropyl) phosphate (TCPP)	N.D.	5 mg/kg
Tris(2-butoxyethyl) phosphate (TBEP)	N.D.	5 mg/kg
Tris(1,3-dichloroisopropyl) phosphate (TDCPP)	N.D.	5 mg/kg
Tri-o-cresyl phcsphate (ToCP)	N.D.	5 mg/kg

Tested Item(s)	Result	MDL
	003	
Total Arsenic (As)	N.D.	10 mg/kg

Tested Item(s)	Result	MDL
	002	
Beryllium (Be)	N.D.	10 mg/kg

Tested Item(s)	Result	MDL
	002	
Antimony (Sb)	N.D.	10 mg/kg

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Tested Item(s)	Result	MDL
	002	
Mercury (Hg)	N.D.	2 mg/kg

Tested Item(s)	Result	MDL
	002	
Hexabromocyclododecane (HBCDD)	N.D.	20 mg/kg

Tested Item(s)	Result	MDL
	002	
Fluorine (F)	N.D.	10 mg/kg
Chlorine (Cl)	N.D.	10 mg/kg
Bromine (Br)	N.D.	10 mg/kg
Iodine (I)	N.D.	10 mg/kg

Tested Item(s)	Result	MDL
	002	
Tetrabromobisphenol A (TBBP-A)	N.D.	5 mg/kg

Tested Item(s)	Result	MDL
	002	
Bisphenol A (BPA)	N.D.	1 mg/kg

Tested Item(s)	Result	MDL
	002	
Organotin compounds		
Dibutyltin (DBT)	N.D.	5 mg/kg
Diocetyltn (DOT)	N.D.	5 mg/kg
Tripropyltin (TPrT)	N.D.	5 mg/kg
Tributyltin (TBT)	N.D.	5 mg/kg
Triphenyltin (TPHT)	N.D.	5 mg/kg

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Tested Item(s)	Result	MDL
	002	
Phthalates		
Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	50 mg/kg
Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	50 mg/kg
Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	N.D.	50 mg/kg
Di-n-octyl phthalate (DNOP) CAS#:117-84-0	N.D.	50 mg/kg
Di-isononyl phthalate (DINP) CAS#:28553-12-0,68515-48-0	N.D.	50 mg/kg
Di-iso-decyl phthalate (DIDP) CAS#:26761-40-0,68515-49-1	N.D.	50 mg/kg
Dimethyl phthalate (DMP) CAS#:131-11-3	N.D.	50 mg/kg
Diethyl phthalate (DEP) CAS#:84-66-2	N.D.	50 mg/kg
Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	50 mg/kg
Dipentyl phthalate (DPP/DPENP) CAS#:131-18-0	N.D.	50 mg/kg
Di-n-hexyl phthalate (DNHP/DHEXP) CAS#:84-75-3	N.D.	50 mg/kg
Bis(2-methoxyethyl) phthalate (DMEP) CAS#:117-82-8	N.D.	50 mg/kg
Diisopentylphthalate (DIPP) CAS#:605-50-5	N.D.	50 mg/kg
N-Pentyl-isopentyl phthalate (NIPP) CAS#:776297-69-9	N.D.	100 mg/kg
*1,2-Benzenedicarboxylic acid, di-(C7-11)-branched and linear alkyl esters (DHNUP) CAS#:68515-42-4	N.D.	100 mg/kg
*1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP) CAS#:71888-89-6	N.D.	100 mg/kg

Tested Item(s)	Result	MDL
	002	
Perfluorooctanoic Acid (PFOA)	N.D.	0.010 mg/kg

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Tested Item(s)	Result	MDL
	002	
Perfluorooctane Sulfonates (PFOS)	N.D.	0.010 mg/kg

Tested Item(s)	Result	MDL
	002	
Tetrachloroethylene	N.D.	5 mg/kg

Tested Item(s)	Result	MDL
	002	
Pentachlorophenol	N.D.	0.5 mg/kg

Sample/Part Description

No.	CTI Sample ID	Description
1	002	Copper foil
2	003	Copper foil

Remark: The sample(s) had been dissolved totally tested for Beryllium, Antimony, Mercury, Total Arsenic.

-MDL = Method Detection Limit

-N.D. = Not Detected (<MDL)

-mg/kg = ppm = parts per million

-*1: In view of the substances are established as UVCB substances (substances of unknown or variable composition, complex reaction products or biological materials) consisting of different and variable constituents, the test results are calculated based on the main constituents of the representative compounds for substances.

Note: “*” indicates the method(s) is (are) not in CNAS accreditation scope.

This testing report integrated the three testing reports (No. A2240475125101002, A2240475125101003) into one. This testing report displaces the original ones which were invalid since the date of this testing report released.

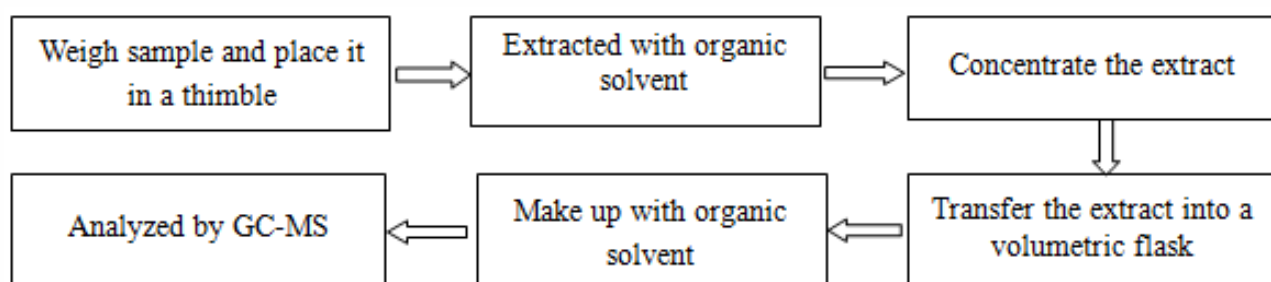
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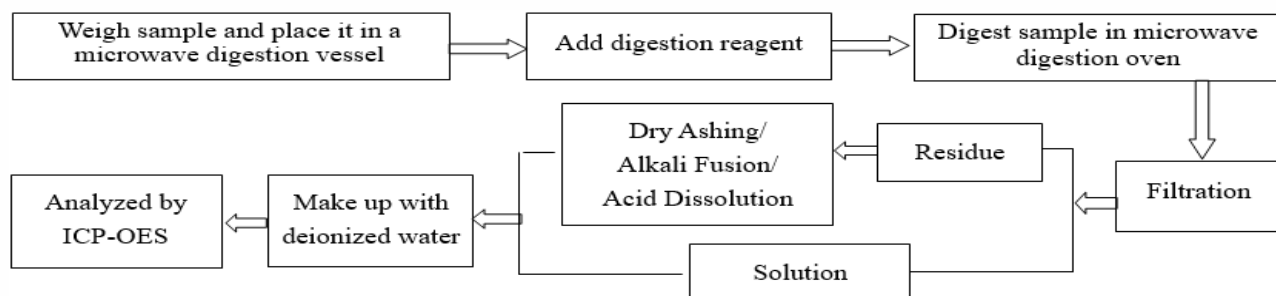
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Test Process

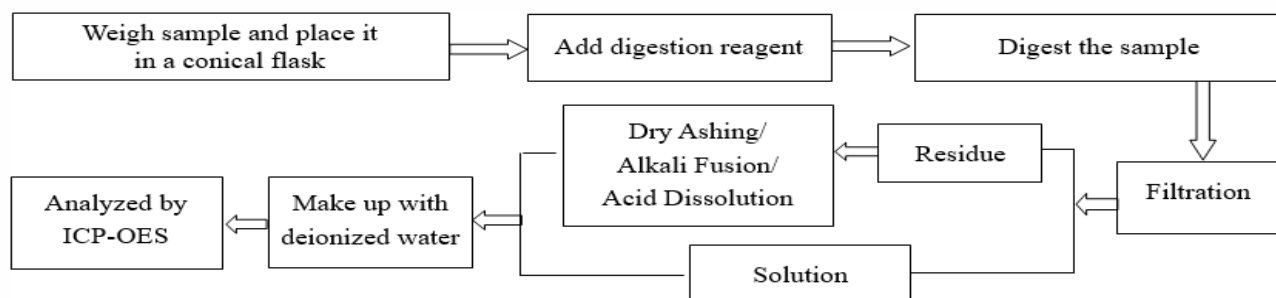
1. Phosphate(s)



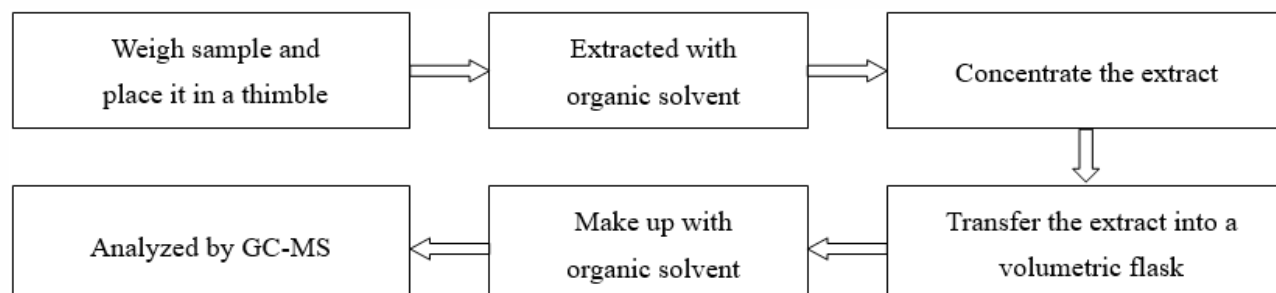
2. Total Arsenic(As)



3. Beryllium(Be), Antimony(Sb)



4. Hexabromocyclododecane (HBCDD)

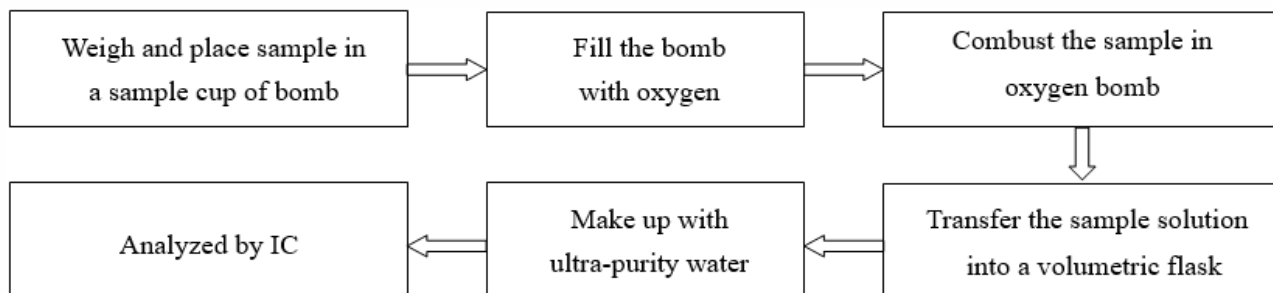


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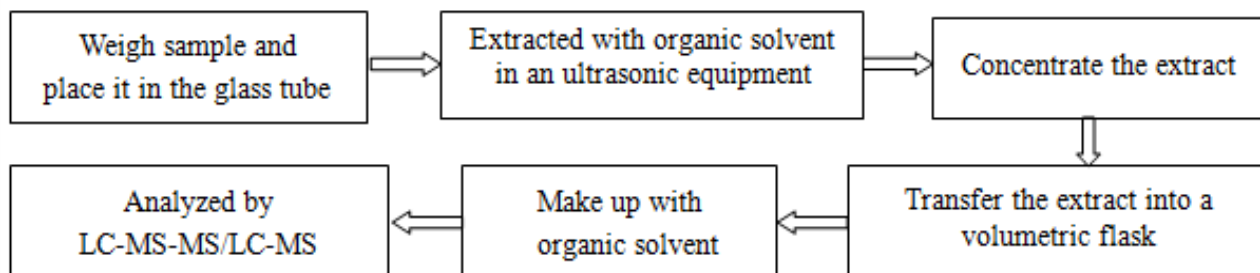
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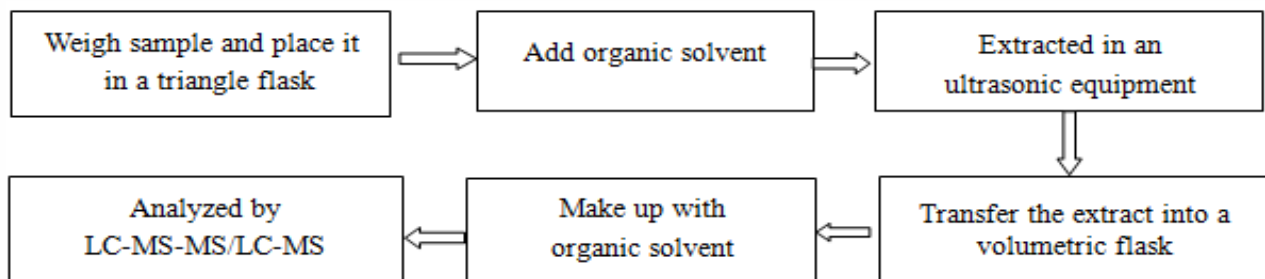
5. Fluorine (F), Chlorine (Cl), Bromine (Br), Iodine (I)



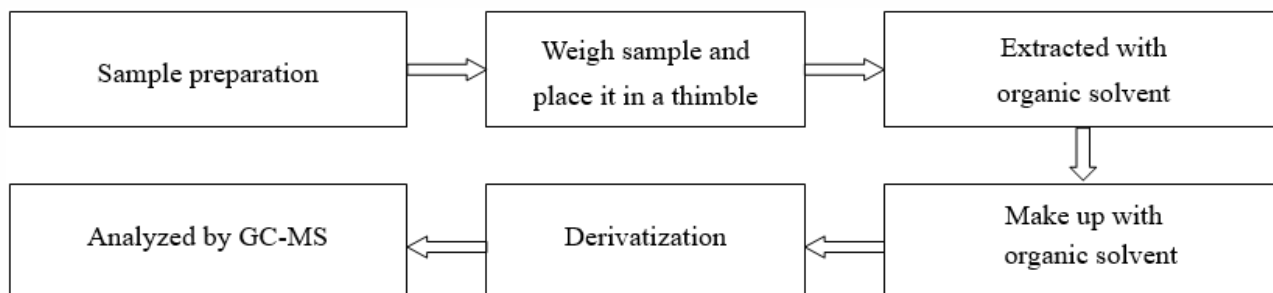
6. Tetrabromobisphenol A (TBBP-A)



7. Bisphenol A (BPA)



8. Organotin compounds

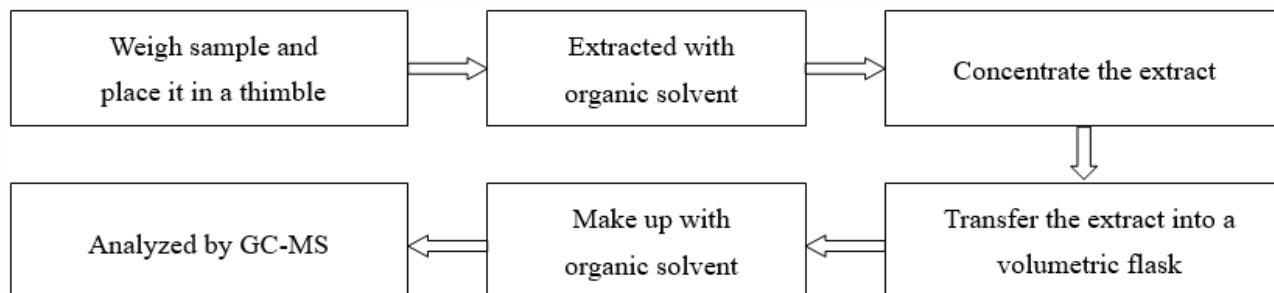


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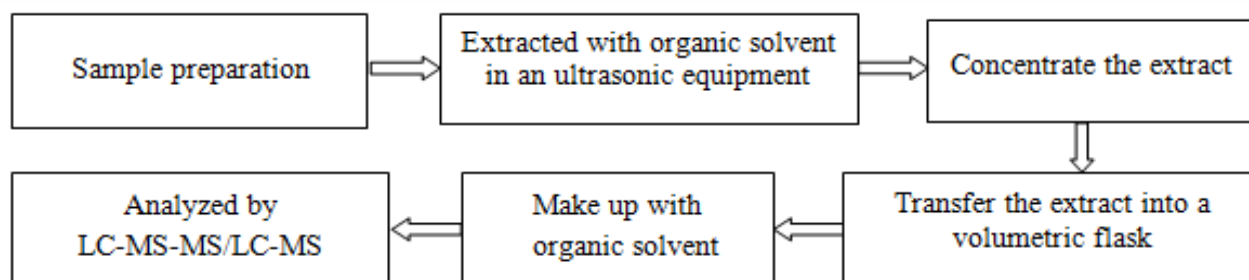
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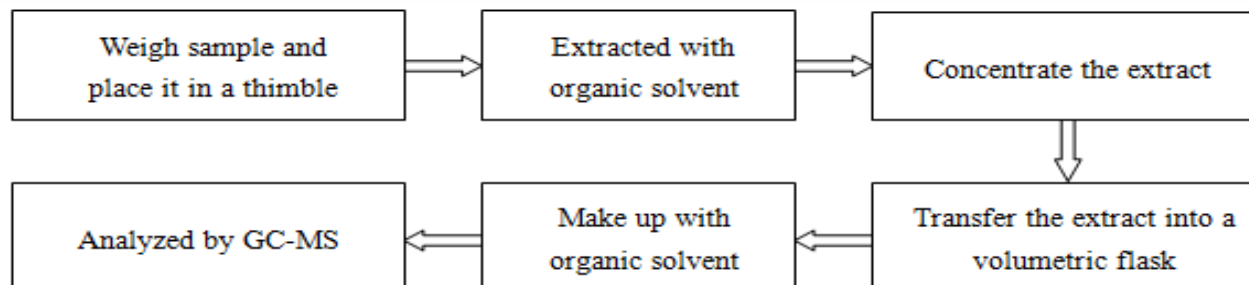
9. Phthalates



10. Perfluorooctanoic Acid(PFOA), Perfluorooctane Sulfonates(PFOS)



11. Pentachlorophenol

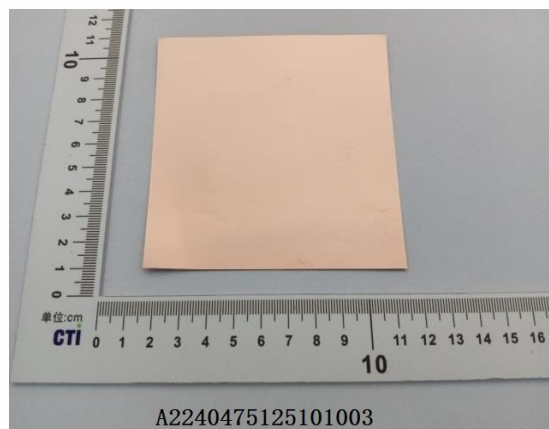
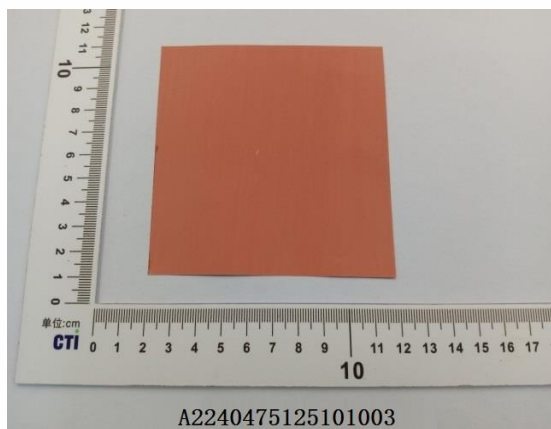
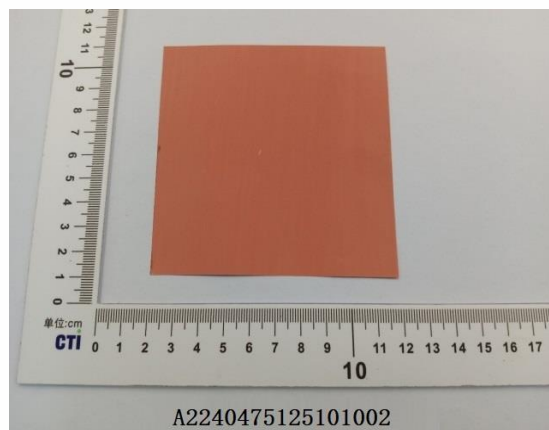
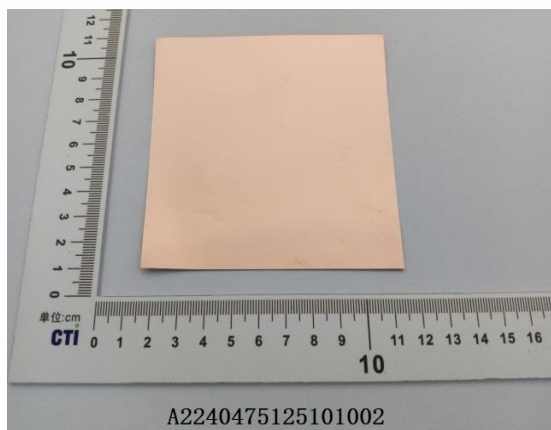


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Photo(s) of the sample(s)



Statement:

1. This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified;
3. The result(s) shown in this report refer(s) only to the sample(s) tested;
4. Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019 / CNAS-GL015:2022;
5. Without written approval of CTI, this report can't be reproduced except in full;
6. In case of any discrepancy between the English version and Chinese version of the testing reports (if generated), the Chinese version shall prevail.

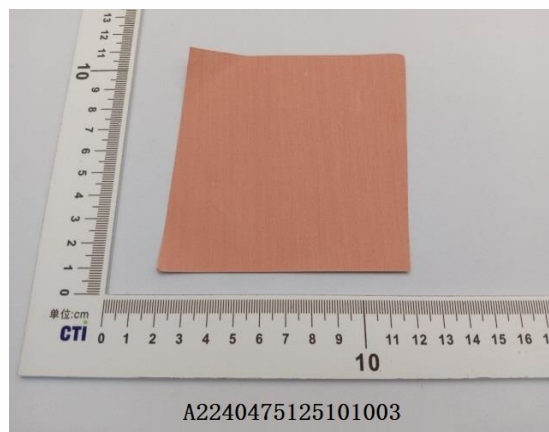
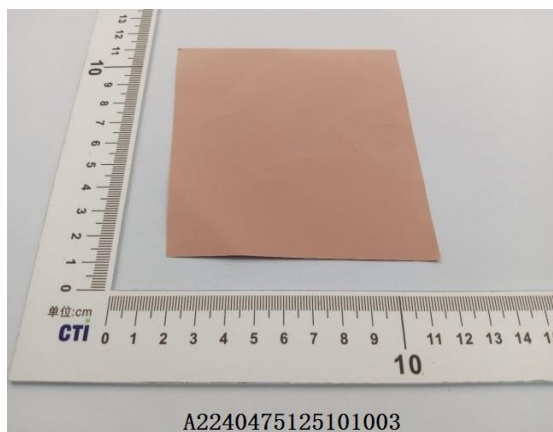
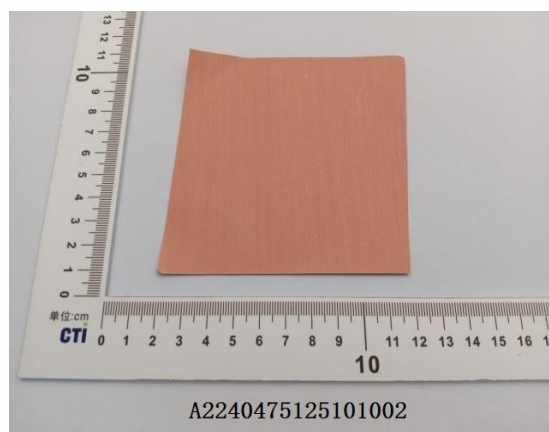
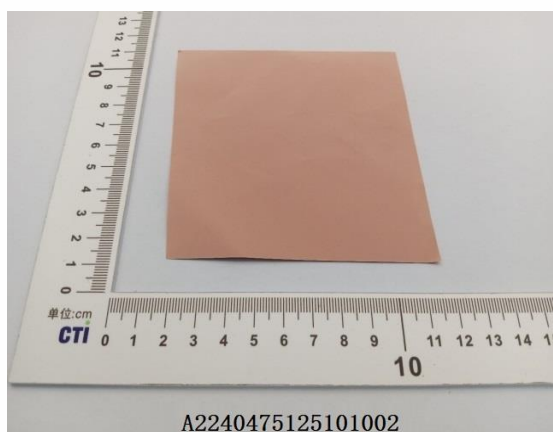
*** End of Report ***

Appendix

Client Reference Information

KSHG、KSHD、KSM、KSMD、KSVP、KSV、KSHD1、KSHD2、KSVP2

Client Reference Photo (Non-tested sample)



Statement:

1. The Appendix Information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.
2. The Appendix Information is/are the supplement(s) for the Report A2240475125101002R1.