

Test Report

No. : CE/2008/76186 Date : 2008/07/25 Page : 1 of 6

EPSON TAIWAN TECHNOLOGY & TRADING LTD.
14F, NO. 7, SONG REN ROAD, TAIPEI 110, TAIWAN, R. O. C.



The following sample(s) was/were submitted and identified by/on behalf of the client as :

Sample Description : LEAD FRAME
Style/Item No. : LEAD FRAME
Sample Receiving Date : 2008/07/22
Testing Period : 2008/07/22 TO 2008/07/25

=====
Test Result(s) : Please refer to next page(s).

Chenyu Kung / Operation Manager
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory – Taipei

Unless otherwise stated 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. 除非另有說明，此報告結果僅對測試之樣品負責。本報告未經本公司書面許可，不可部份複製。

This Test Report is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at http://www.sgs.com/terms_and_conditions.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this Test Report is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Test Report

No. : CE/2008/76186 Date : 2008/07/25 Page : 2 of 6

EPSON TAIWAN TECHNOLOGY & TRADING LTD.
14F, NO. 7, SONG REN ROAD, TAIPEI 110, TAIWAN, R. O. C.



Test Result(s)

PART NAME NO.1 : PLATING LAYER OF SILVER COLORED METAL (INCLUDING THE FRAME)
PART NAME NO.2 : BASE MATERIAL OF SILVER COLORED METAL (INCLUDING THE FRAME)

Test Item (s):	Unit	Method	MDL	Result	
				No.1	No.2
Cadmium (Cd)	mg/kg	With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of Cadmium by ICP-AES.	2	n.d.	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of Lead by ICP-AES.	2	n.d.	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of Mercury by ICP-AES.	2	n.d.	n.d.
Hexavalent Chromium Cr(VI) by Spot test / boiling water extraction	**	With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of Hexavalent Chromium for metallic samples by Spot test / boiling water extraction Method. (See Note 5)	0.02mg/kg with 50 cm ² surface area	Negative	Negative
PFOS	mg/kg	With reference to US EPA 3540C : 1996 method for PFOS Content. Analysis was performed by LC/MS.	10	n.d.	n.d.

Note : 1. mg/kg = ppm

2. n.d. = Not Detected

3. MDL = Method Detection Limit

4. ** = Qualitative analysis (No Unit)

5. Spot-test:

Negative = Absence of Cr(VI) coating / surface layer,

Positive = Presence of Cr(VI) coating / surface layer;

(The tested sample should be further verified by boiling-water-extraction method if the spot test result cannot be confirmed.)

Boiling-water-extraction:

Negative = Absence of Cr(VI) coating / surface layer.

Positive = Presence of Cr(VI) coating / surface layer;

the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm² sample surface area.

Unless otherwise stated 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. 除非另有說明，此報告結果僅對測試之樣品負責。本報告未經本公司書面許可，不可部份複製。

This Test Report is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at http://www.sgs.com/terms_and_conditions.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this Test Report is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Test Report

No. : CE/2008/76186 Date : 2008/07/25 Page : 3 of 6

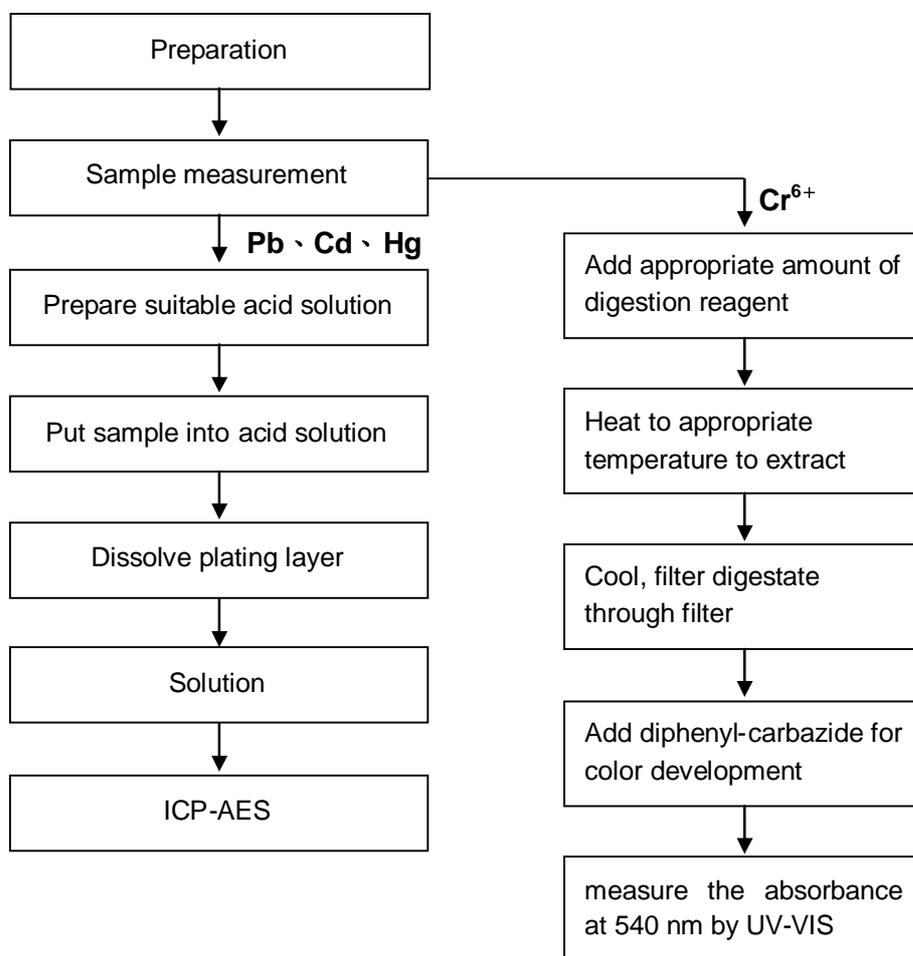
EPSON TAIWAN TECHNOLOGY & TRADING LTD.
14F, NO. 7, SONG REN ROAD, TAIPEI 110, TAIWAN, R. O. C.



PART NAME NO.1

- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang

Flow Chart of Stripping method for metal analysis



Unless otherwise stated 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. 除非另有說明，此報告結果僅對測試之樣品負責。本報告未經本公司書面許可，不可部份複製。

This Test Report is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at http://www.sgs.com/terms_and_conditions.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this Test Report is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Test Report

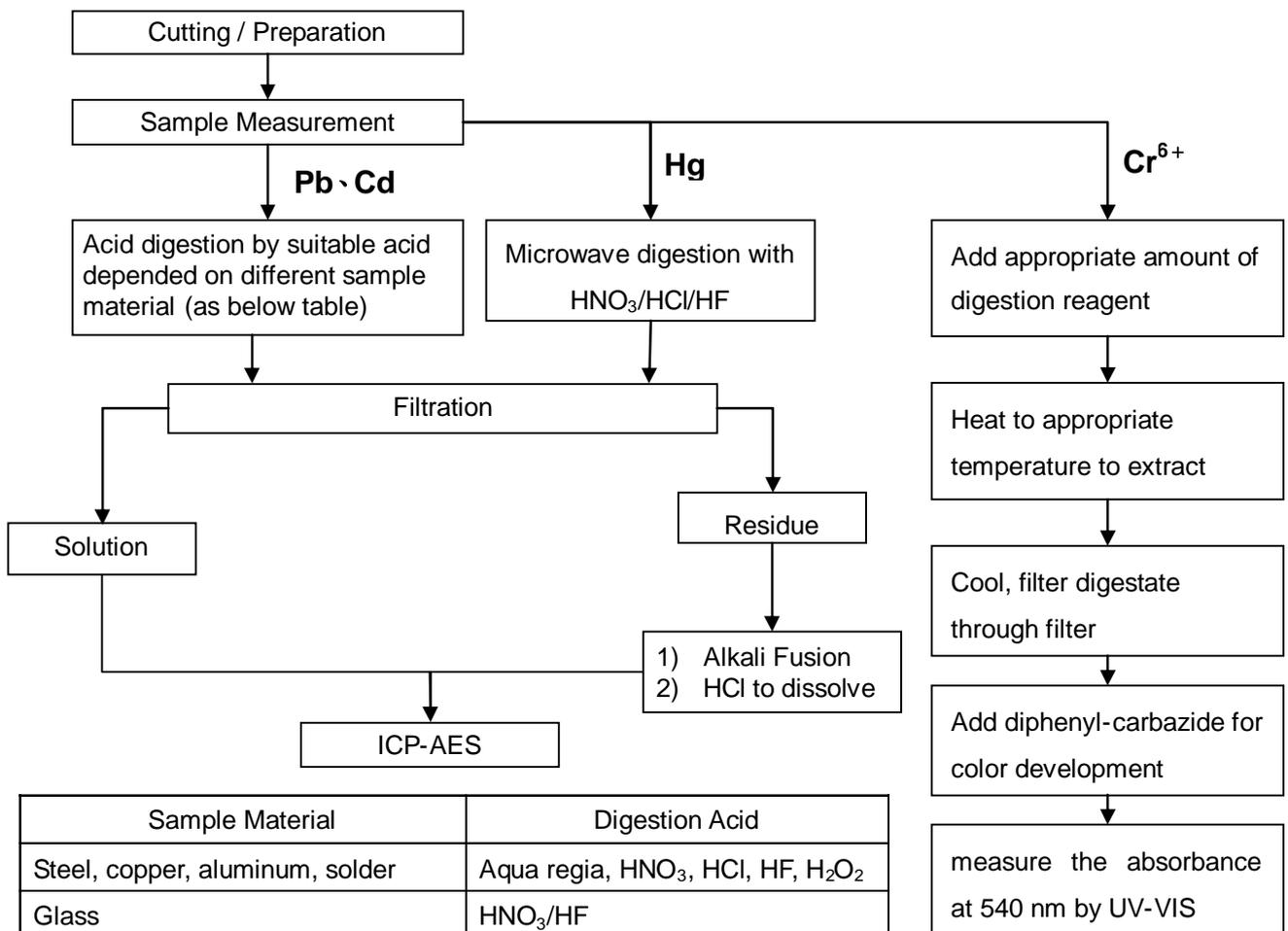
No. : CE/2008/76186 Date : 2008/07/25 Page : 4 of 6

EPSON TAIWAN TECHNOLOGY & TRADING LTD.
14F, NO. 7, SONG REN ROAD, TAIPEI 110, TAIWAN, R. O. C.



PART NAME NO.2

- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart.
(Cr⁶⁺ test method excluded)
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



Sample Material	Digestion Acid
Steel, copper, aluminum, solder	Aqua regia, HNO ₃ , HCl, HF, H ₂ O ₂
Glass	HNO ₃ /HF
Gold, platinum, palladium, ceramic	Aqua regia
Silver	HNO ₃
Plastic	H ₂ SO ₄ , H ₂ O ₂ , HNO ₃ , HCl
Others	Any acid to total digestion

Unless otherwise stated 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. 除非另有說明，此報告結果僅對測試之樣品負責。本報告未經本公司書面許可，不可部份複製。

This Test Report is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at http://www.sgs.com/terms_and_conditions.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this Test Report is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Test Report

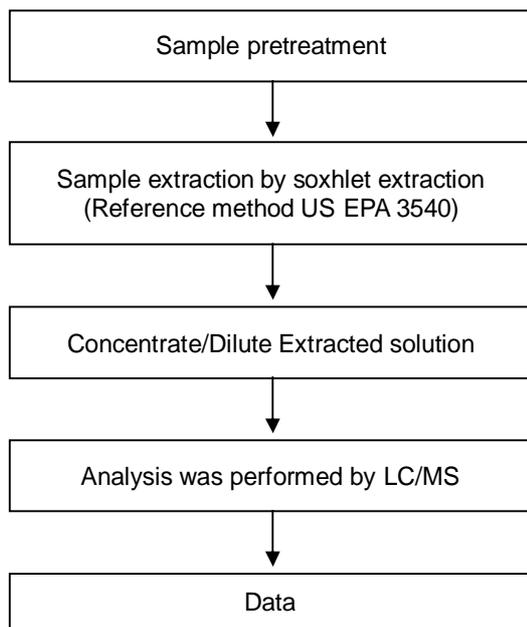
No. : CE/2008/76186 Date : 2008/07/25 Page : 5 of 6

EPSON TAIWAN TECHNOLOGY & TRADING LTD.
14F, NO. 7, SONG REN ROAD, TAIPEI 110, TAIWAN, R. O. C.



Analytical flow chart of PFOA/PFOS content

- 1) Name of the person who made measurement: Carrie Liu
- 2) Name of the person in charge of measurement: Shinjyh Chen



Unless otherwise stated 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. 除非另有說明，此報告結果僅對測試之樣品負責。本報告未經本公司書面許可，不可部份複製。

This Test Report is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at http://www.sgs.com/terms_and_conditions.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this Test Report is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Test Report

No. : CE/2008/76186 Date : 2008/07/25 Page : 6 of 6

EPSON TAIWAN TECHNOLOGY & TRADING LTD.
14F, NO. 7, SONG REN ROAD, TAIPEI 110, TAIWAN, R. O. C.



** End of Report **

Unless otherwise stated 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. 除非另有說明，此報告結果僅對測試之樣品負責。本報告未經本公司書面許可，不可部份複製。

This Test Report is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at http://www.sgs.com/terms_and_conditions.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this Test Report is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.