



THE INDUSTRIAL ANALYSIS SERVICE LTD.

TEL:+81-48-924-7151 FAX:+81-48-928-3587 e-mail:ias@sangyobunseki.co.jp

2-11-7 Yatsuka Souka Saitama 340-0028 Japan

TEST REPORT

Request No. 59002411141
Report No. EW240000000641-02
Date of issue: 14 November 2024

To. NGK Electronics Devices, Inc.

Address: 2701-1 Higashibun, Ohmine-cho, Mine-Shi, Yamaguchi. 759-2212, Japan

Name of sample: Pd Plating

Date of receipt of sample: 6 November 2024

Measurement days: 6 November 2024 ~ 14 November 2024

The following is the report on the requested test of the sample

Test Items	Unit	Test result	D.L.	Test Method
Cd	ppm	N.D.	2.0	With reference to IEC62321-5(2013) ICP/MS
Pb	ppm	N.D.	2.0	With reference to IEC62321-5(2013) ICP/MS
Cr6+	ppm	N.D.	1.0	With reference to IEC62321-7-1(2015) Boiling water extraction/UV-VIS
Hg	ppm	N.D.	2.0	With reference to IEC62321-4(2013)/AMD1(2017) ICP/MS
PBBs	ppm	N.D.	5.0	With reference to IEC62321-6(2015) GC/MS
PBDEs	ppm	N.D.	5.0	With reference to IEC62321-6(2015) GC/MS
Bis(2-ethylhexyl) phthalate (DEHP)	ppm	N.D.	50	With reference to IEC62321-8(2017) GC/MS
Butylbenzyl phthalate (BBP)	ppm	N.D.	50	With reference to IEC62321-8(2017) GC/MS
Dibutyl phthalate (DBP)	ppm	N.D.	50	With reference to IEC62321-8(2017) GC/MS
Diisobutyl phthalate (DIBP)	ppm	N.D.	50	With reference to IEC62321-8(2017) GC/MS
F	ppm	N.D.	50	With reference to EN14582(2016) Furnace combustion/IC
Cl	ppm	N.D.	50	With reference to EN14582(2016) Furnace combustion/IC
Br	ppm	N.D.	50	With reference to EN14582(2016) Furnace combustion/IC
I	ppm	N.D.	50	With reference to EN14582(2016) Furnace combustion/IC

Note: The results shown in this test report refer only to the sample(s) tested.
Plating part

N.D.means the analysis result is less than fixed quality lower limit level calculated according to our established precision management condition. This test report may only be quoted in full.
mg/kg=ppm

THE INDUSTRIAL ANALYSIS SERVICE LTD.

吉田 貴則

TAKANORI YOSHIDA

[illegible]

Note: The results shown in this test report refer only to the sample(s) tested.

N.D.means the analysis result is less than fixed quality lower limit level calculated according to our established precision management condition. This test report may only be quoted in full.
mg/kg=ppm

Test Items	Unit	Test result	D.L.	Test Method
Monobromobiphenyl (MonoBB)	ppm	N.D.	—	With reference to IEC62321-6(2015) GC/MS
Dibromobiphenyl (DiBB)	ppm	N.D.	—	With reference to IEC62321-6(2015) GC/MS
Tribromobiphenyl (TriBB)	ppm	N.D.	—	With reference to IEC62321-6(2015) GC/MS
Tetrabromobiphenyl (TetraBB)	ppm	N.D.	—	With reference to IEC62321-6(2015) GC/MS
Pentabromobiphenyl (PentaBB)	ppm	N.D.	—	With reference to IEC62321-6(2015) GC/MS
Hexabromobiphenyl (HexaBB)	ppm	N.D.	—	With reference to IEC62321-6(2015) GC/MS
Heptabromobiphenyl (HeptaBB)	ppm	N.D.	—	With reference to IEC62321-6(2015) GC/MS
Octabromobiphenyl (OctaBB)	ppm	N.D.	—	With reference to IEC62321-6(2015) GC/MS
Nonabromobiphenyl (NonaBB)	ppm	N.D.	—	With reference to IEC62321-6(2015) GC/MS
Decabromobiphenyl (DecaBB)	ppm	N.D.	—	With reference to IEC62321-6(2015) GC/MS
SUM PBBs	ppm	N.D.	5.0	With reference to IEC62321-6(2015) GC/MS
Monobromodiphenylether (MonoBDE)	ppm	N.D.	—	With reference to IEC62321-6(2015) GC/MS
Dibromodiphenylether (DiBDE)	ppm	N.D.	—	With reference to IEC62321-6(2015) GC/MS
Tribromodiphenylether (TriBDE)	ppm	N.D.	—	With reference to IEC62321-6(2015) GC/MS
Tetrabromodiphenylether (TetraBDE)	ppm	N.D.	—	With reference to IEC62321-6(2015) GC/MS
Pentabromodiphenylether (PentaBDE)	ppm	N.D.	—	With reference to IEC62321-6(2015) GC/MS
Hexabromodiphenylether (HexaBDE)	ppm	N.D.	—	With reference to IEC62321-6(2015) GC/MS
Heptabromodiphenylether (HeptaBDE)	ppm	N.D.	—	With reference to IEC62321-6(2015) GC/MS
Octabromodiphenylether (OctaBDE)	ppm	N.D.	—	With reference to IEC62321-6(2015) GC/MS
Nonabromodiphenylether (NonaBDE)	ppm	N.D.	—	With reference to IEC62321-6(2015) GC/MS
Decabromodiphenylether (DecaBDE)	ppm	N.D.	—	With reference to IEC62321-6(2015) GC/MS
SUM PBDEs	ppm	N.D.	5.0	With reference to IEC62321-6(2015) GC/MS
Remainder of page intentionally left blank				

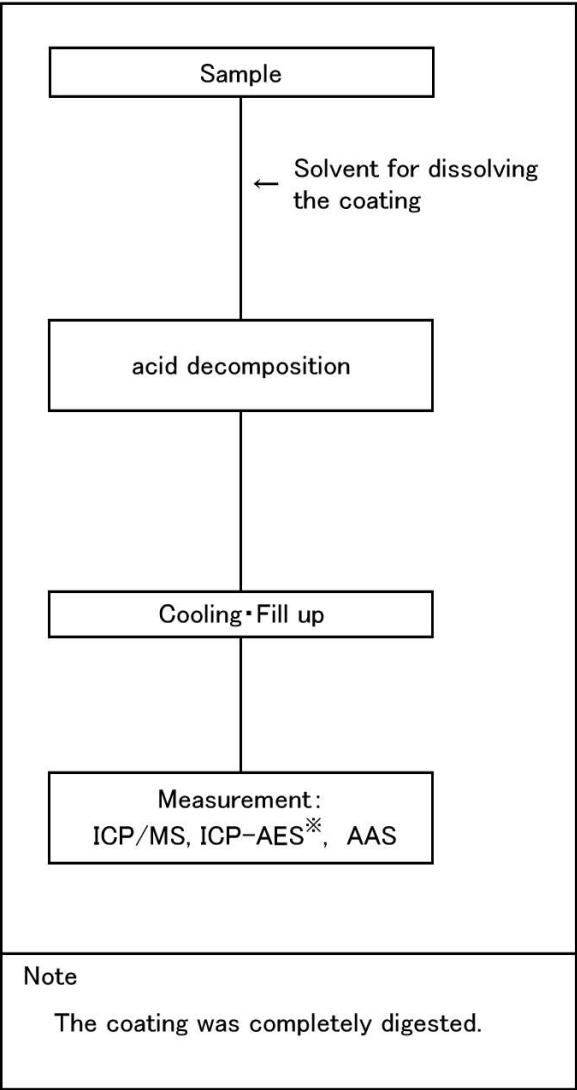
Note: The results shown in this test report refer only to the sample(s) tested.

N.D.means the analysis result is less than fixed quality lower limit level calculated according to our established precision management condition. This test report may only be quoted in full.
mg/kg=ppm

Flow chart

Report No.	: EW240000000641-02
Measurement days	: 6 November 2024 ~ 14 November 2024
Operator	: Wataru Imaoka Risa Minowada

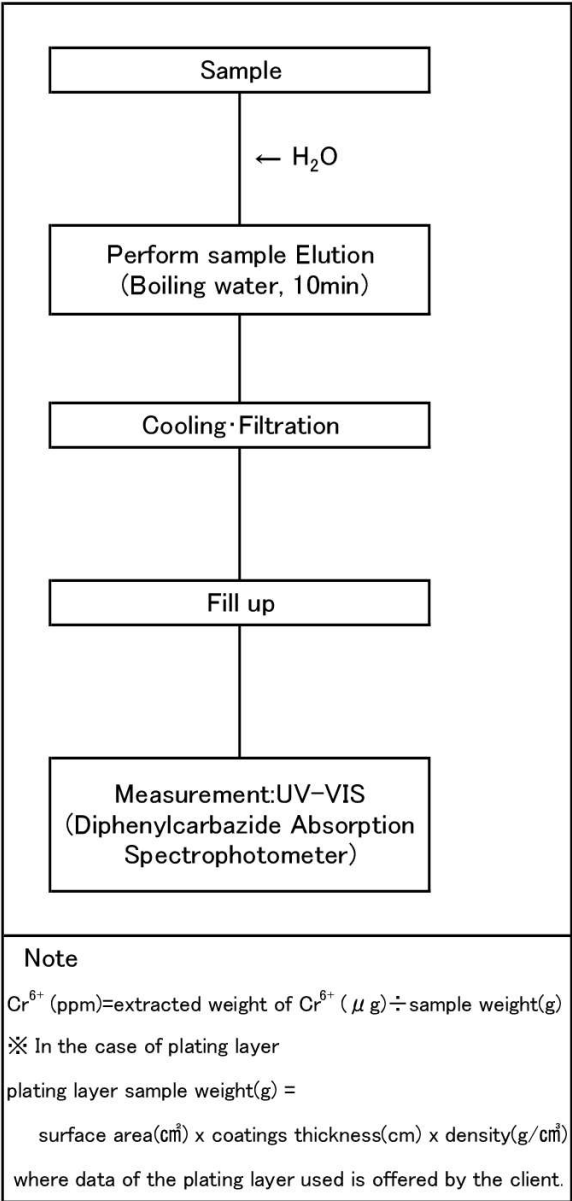
Cd, Pb, Hg, Sb



ICP/MS : Agilent Technologies 7700X
ICP-AES : Rigaku CIROS CCD
AAS : HIRANUMA MERCURY ANALYZER HG-200

※It is also called ICP-OES.

Cr6+

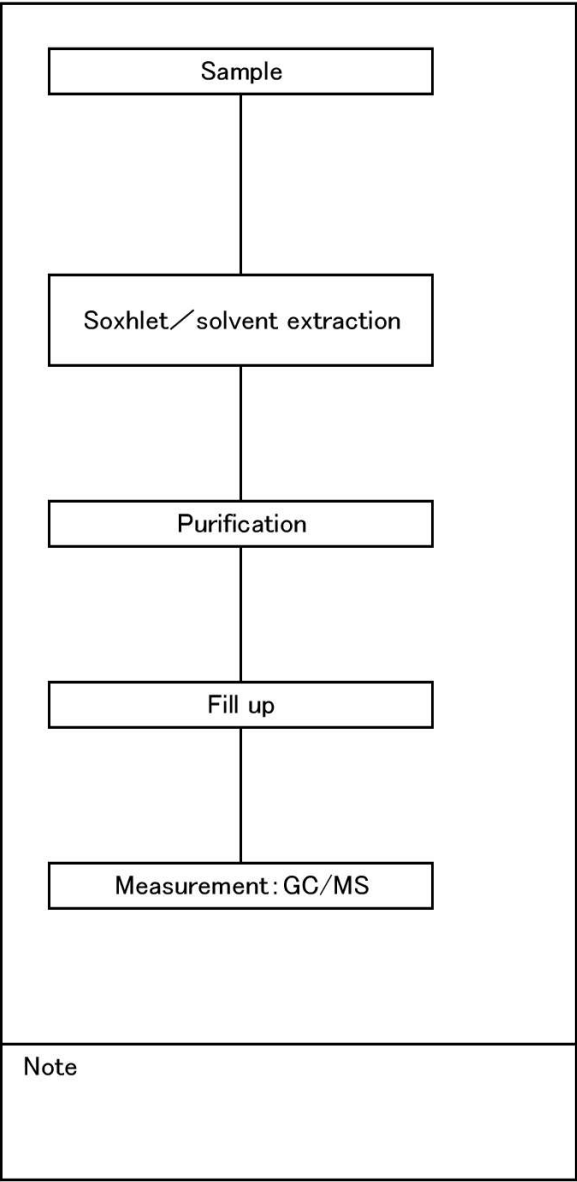


UV-VIS : HITACHI High-Technologies U-2910

Flow chart

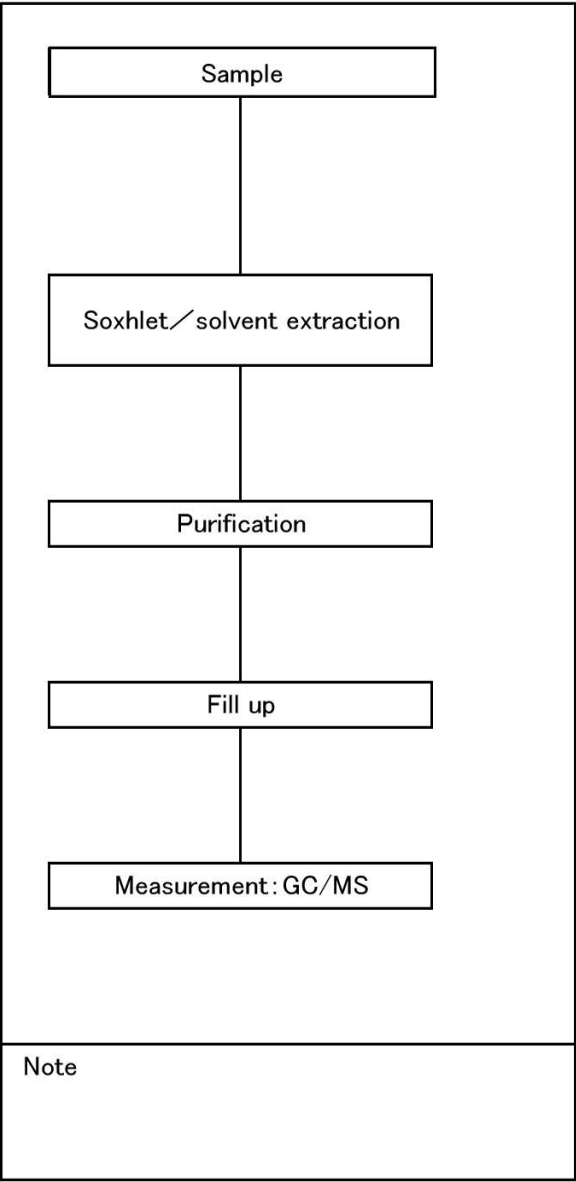
Report No.	: EW240000000641-02
Measurement days	: 6 November 2024 ~ 14 November 2024
Operator	: Yuichi Kuboji

PBBs, PBDEs



GC/MS: Agilent Technologies GC 7890B MS 5977A

phthalates

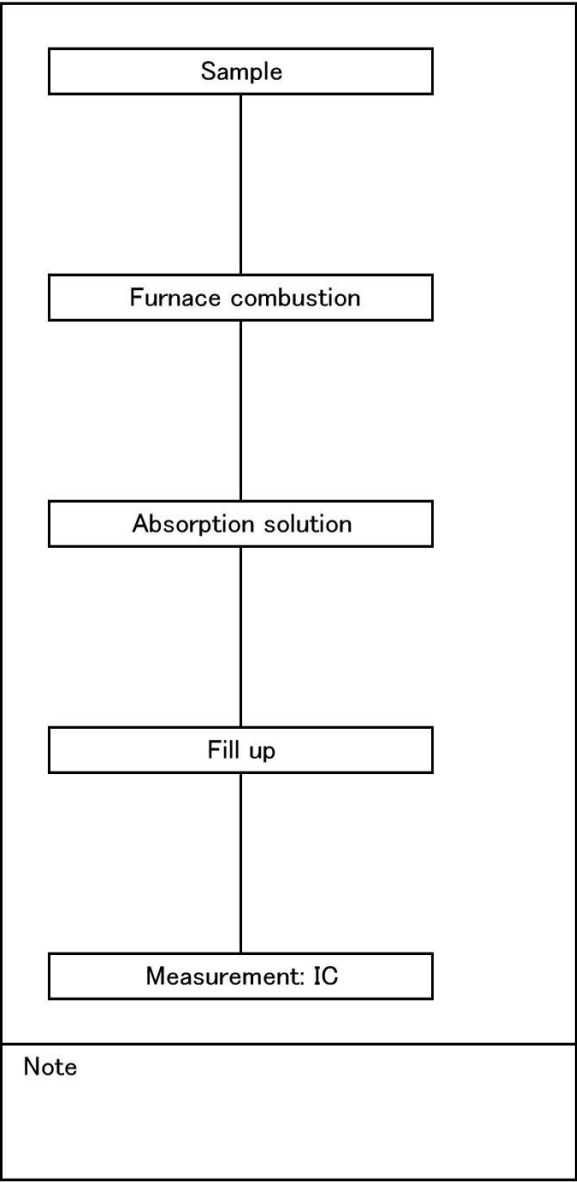


GC/MS : SHIMADZU GCMS-QP2020

Flow chart

Report No.	: EW240000000641-02
Measurement days	: 6 November 2024 ~ 14 November 2024
Operator	: Youko Tajima

F, Cl, Br, I



IC : DIONEX ICS-1100 RFIC

Report No. EW240000000641-02

