



THE INDUSTRIAL ANALYSIS SERVICE LTD.

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

TEST REPORT

Request No. 0194290
Report No. EW240000000459-01
Date of issue: 27 August 2024

To. NGK Electronics Devices, Inc.

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

Name of sample: Ni Plating (Ni-Co)

Date of receipt of sample: 6 August 2024

Measurement days: 6 August 2024 ~ 27 August 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.	0.1	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

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吉田 貴則

TAKANORI YOSHIDA

[illegible]

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

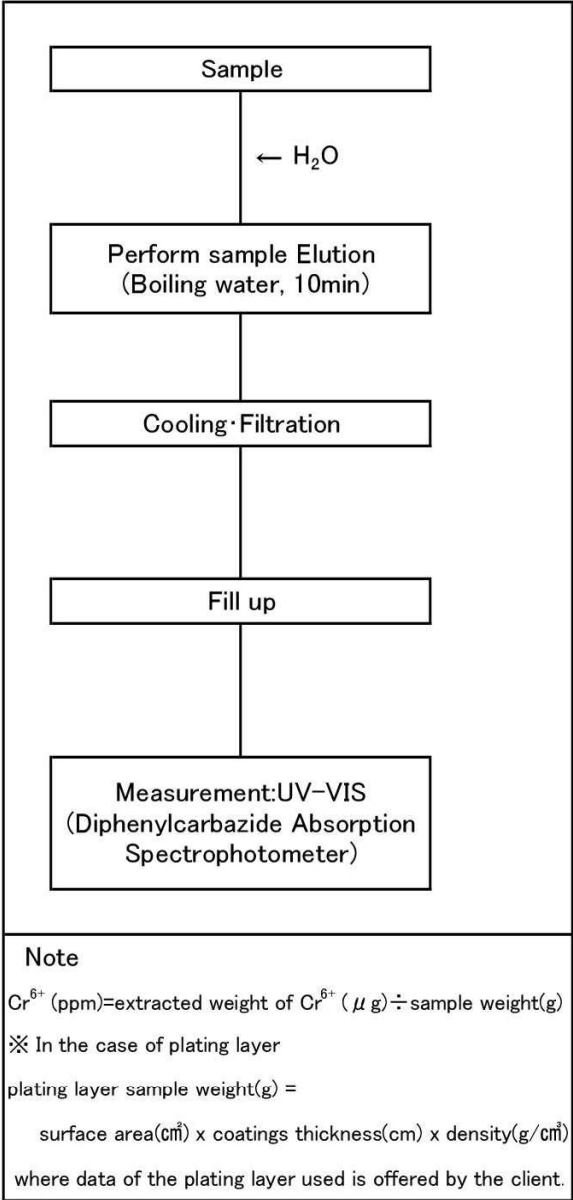
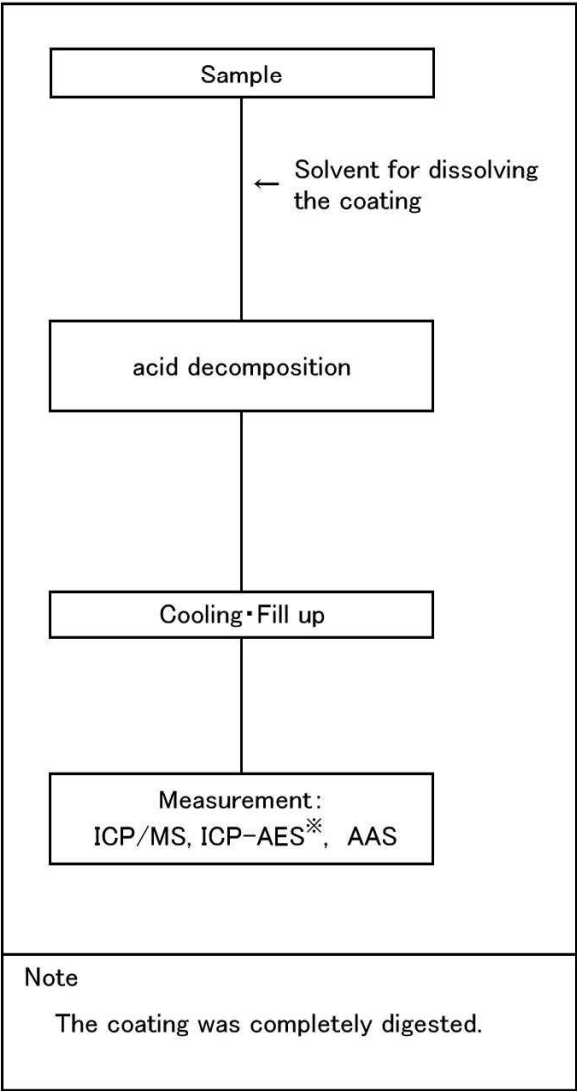
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mg/kg=ppm

Flow chart

Report No.	: EW240000000459-01
Measurement days	: 6 August 2024 ~ 27 August 2024
Operator	: Wataru Imaoka Norio Watanabe

Cd, Pb, Hg, Be, Sb, P

Cr6+



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

※It is also called ICP-OES.

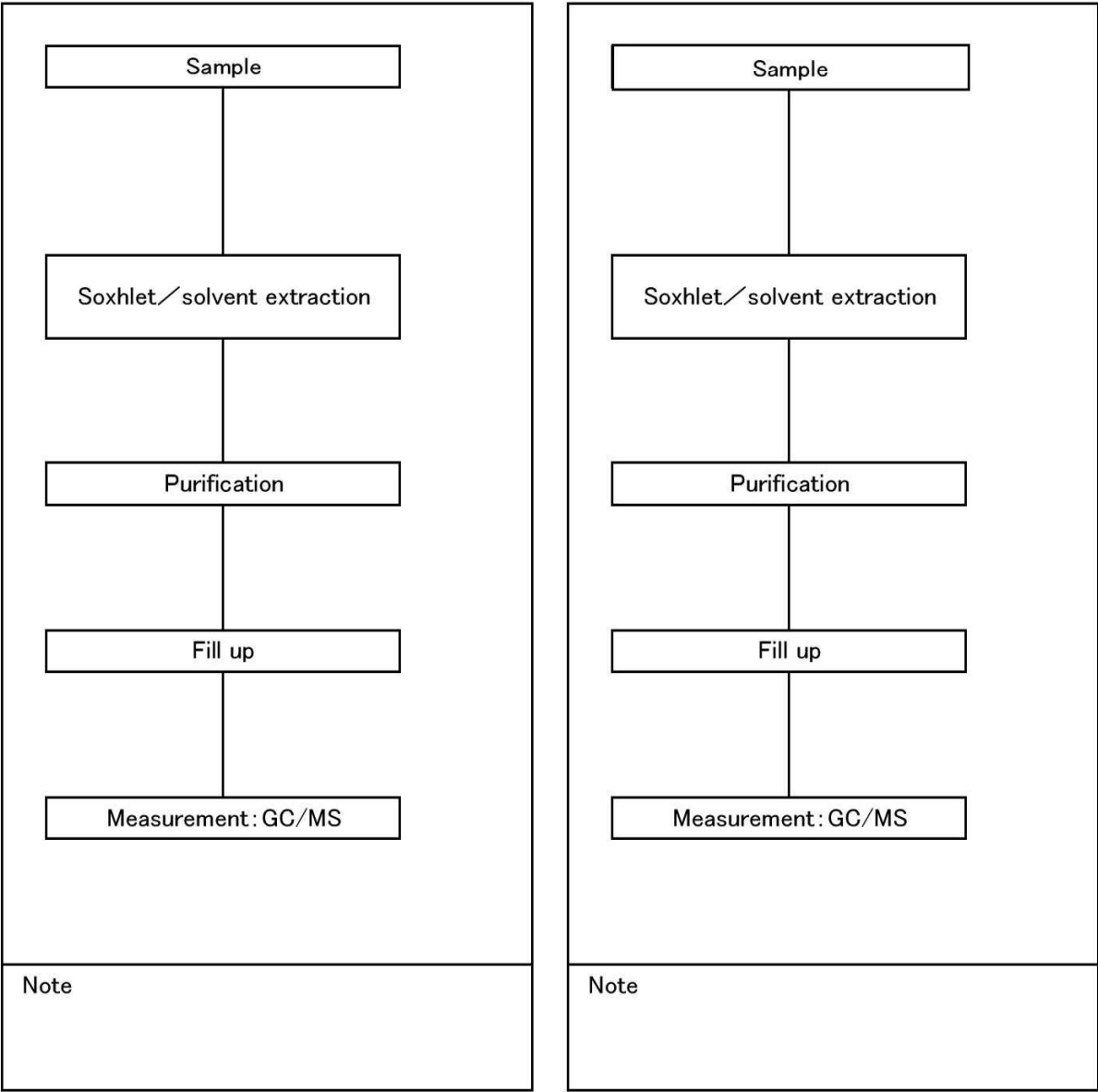
UV-VIS : HITACHI High-Technologies U-2910

Flow chart

Report No.	: EW240000000459-01
Measurement days	: 6 August 2024 ~ 27 August 2024
Operator	: Yuichi Kuboji

PBBs, PBDEs,
Hexabromocyclododecane (HBCDD)

phthalates



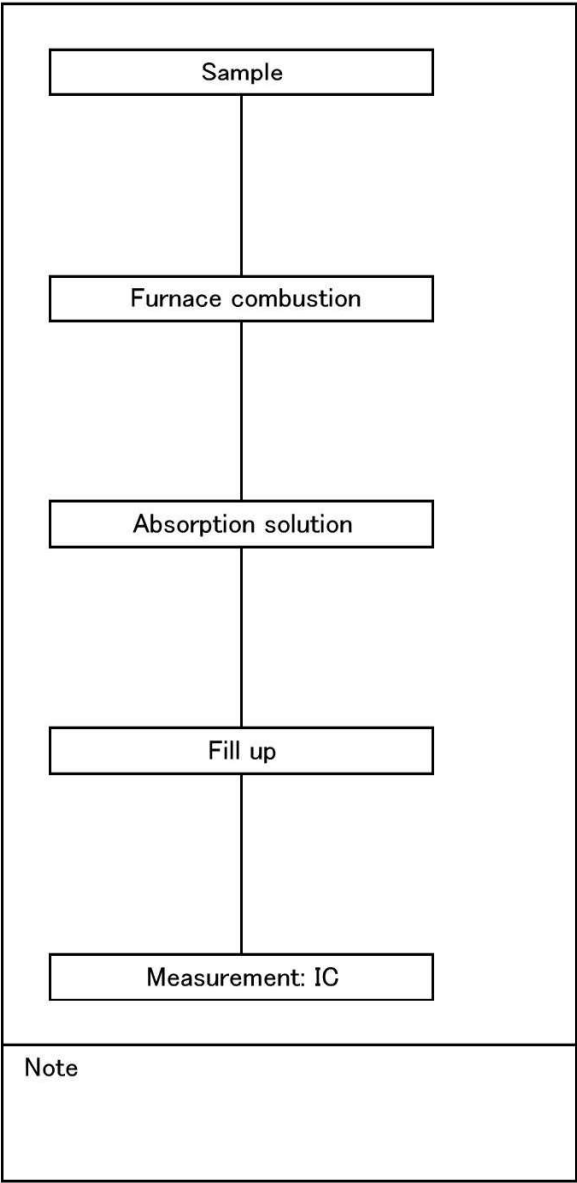
GC/MS: Agilent Technologies GC 7890B MS 5977A

GC/MS : SHIMADZU GCMS-QP2020

Flow chart

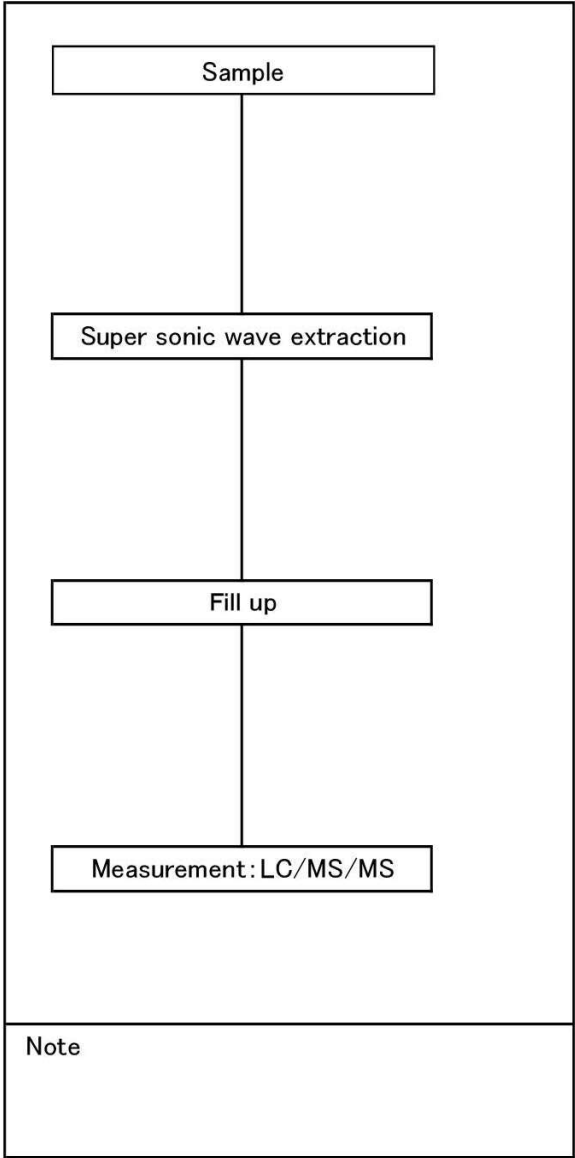
Report No.	:	EW240000000459-01
Measurement days	:	6 August 2024 ~ 27 August 2024
Operator	:	Youko Tajima Risa Minowada

F, Cl, Br, I



IC : DIONEX ICS-1100 RFIC

PFOS, PFOA

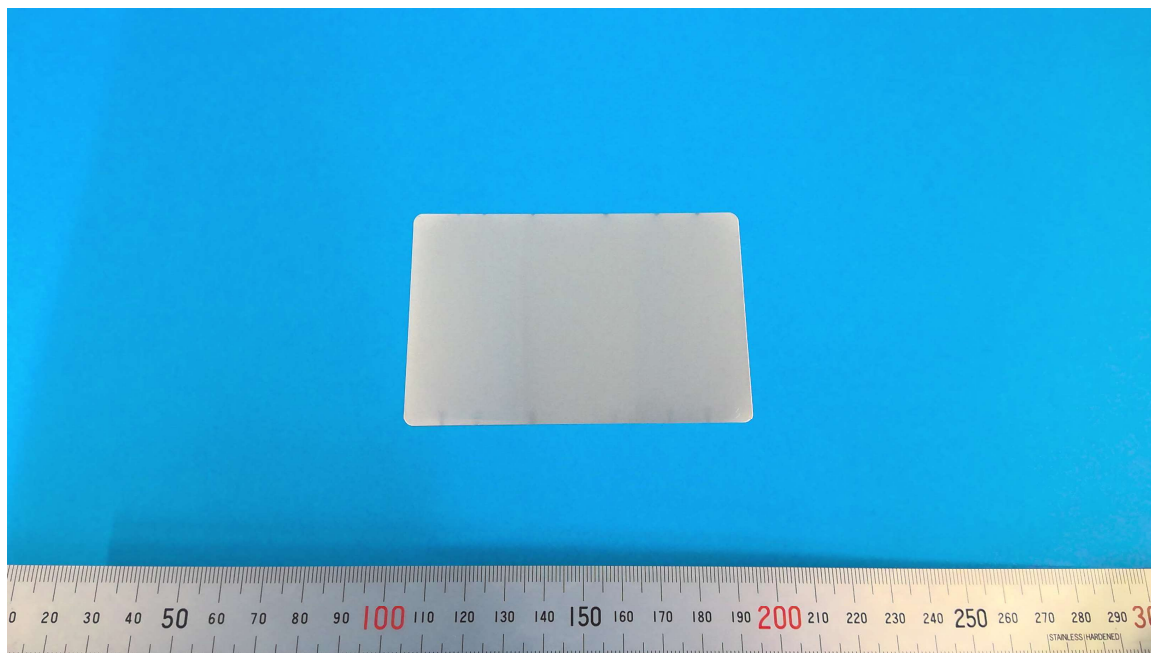


LC/MS/MS : Waters Xevo-TQ

Certified : IAS-Takanori.Yoshida

OU2-7011801008067-50018-MC7337-EDD : Japan EDD Authentication Promotion Council : JP : Tokyo : Minato

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