



DOC
Declaration Of Conformity

We

Santon International bv
Hekendorpstraat 69 ● 3079 DX Rotterdam The Netherlands

DECLARE ON OUR SOLE RESPONSIBILITY THAT THE PRODUCT

KIND OF EQUIPMENT : PV DC Switch

TYPE-DESIGNATION : X-XA-XB-XC Type

This EC-Declaration of conformity is following the provisions of RoHS DIRECTIVE 2011/65/EU and its amending.

It is confirmed that a sample of the product has been tested and found in conformity with below standard(s):

RoHS IEC 62321-4 : 2017
IEC 62321-5 : 2013
IEC 62321-6 : 2015
IEC 62321-7-1 : 2015
IEC 62321-7-2 : 2017
IEC 62321-8 : 2017

Detailed specification of the tested product shown in the following test report(s):

RoHS Test Report : ETLR190305.0640~ETLR190305.0655

Date of issue :

Authorized By :

Santon International bv
Hekendorpstraat 69 ● 3079 DX
Rotterdam The Netherlands

Applicant : Santon International bv
Hekendorpstraat 69 ● 3079 DX Rotterdam The Netherlands

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

Sample Name : Knob screw

Sample ID/Description : -

Date of receipt : Mar 05, 2019

Test Period : Mar 05 ~ 11, 2019

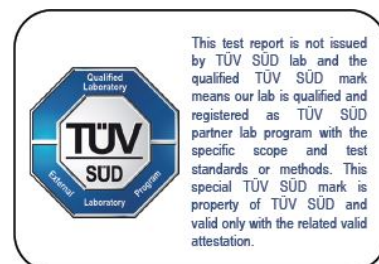
Date of issue : Mar 11, 2019

For further details, please refer to the following pages.

Approved by :



Technical Manager: Jeong Ryeol Baik



■ **Result**

Heavy metal

Item(s)	Unit	Test Method	MDL	Result
Cadmium (Cd)	mg/kg	IEC 62321-5 : 2013, ICP-OES.	1	N.D.
Lead (Pb)	mg/kg		5	N.D.
Mercury (Hg)	mg/kg	IEC 62321-4 : 2017, ICP-OES.	5	N.D.
Hexavalent Chromium (Cr ⁶⁺)	µg/cm ²	IEC 62321-7-1 : 2015, UV-VIS.	0.1	Negative

* Note :

MDL = Method detection limit

N.D. = Not detected

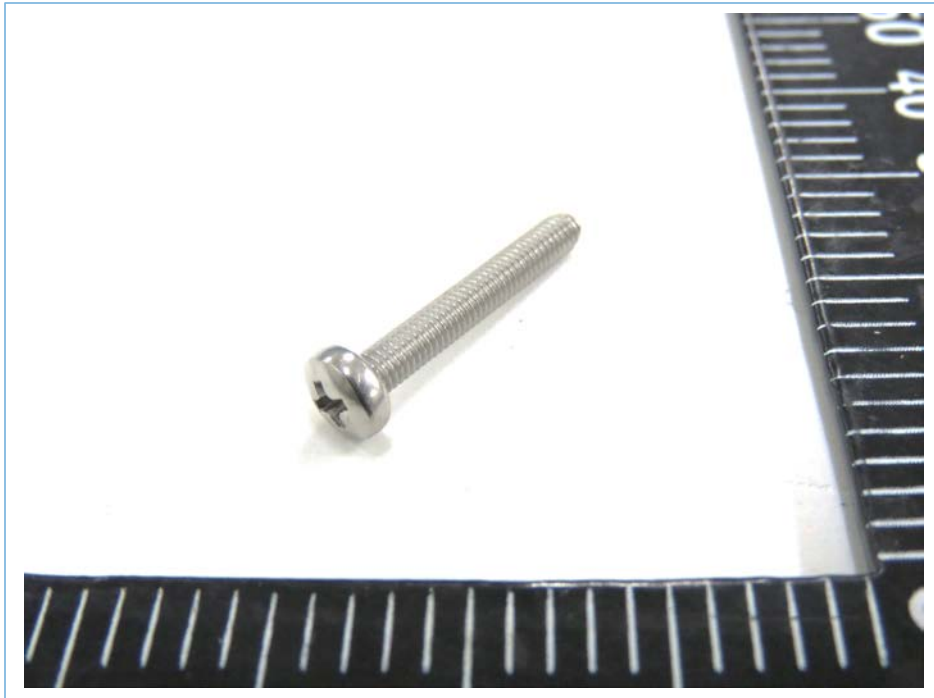
Negative = Undetectable / Positive = Detectable

mg/kg = ppm (part per million)

If the star mark (*) is shown on the item, it isn't the scope recognized by TÜV SÜD.

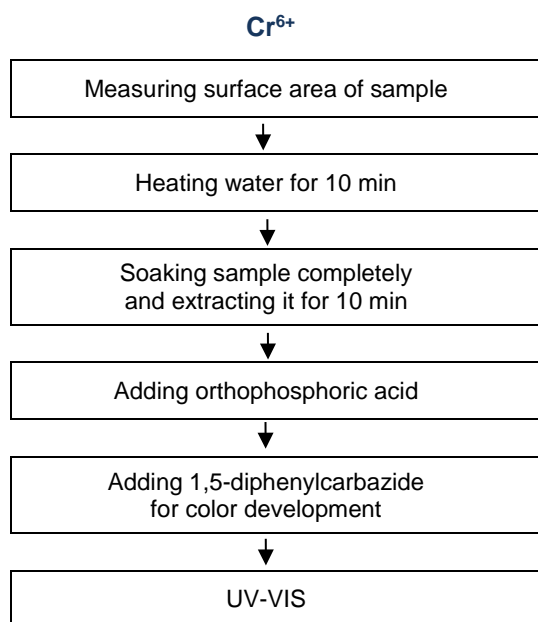
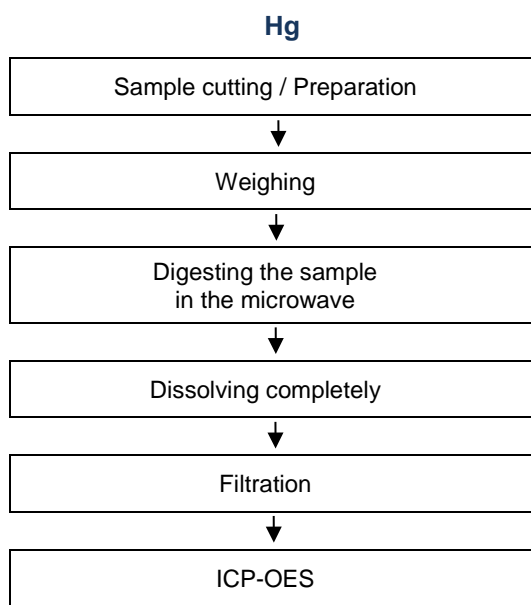
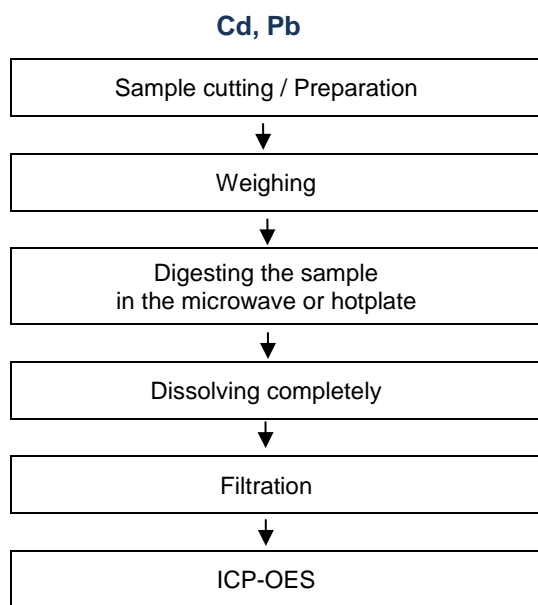
Tested by Na Rae Kim and(or) Hyae Yeon Yoo

■ Photograph



The tested sample is marked by an arrow if it's shown on the photograph.

■ Flow chart



- E N D -

Applicant : Santon International bv
Hekendorpstraat 69 ● 3079 DX Rotterdam The Netherlands

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

Sample Name : Mechanism screw

Sample ID/Description : -

Date of receipt : Mar 05, 2019

Test Period : Mar 05 ~ 11, 2019

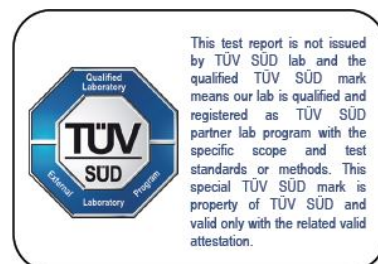
Date of issue : Mar 11, 2019

For further details, please refer to the following pages.

Approved by :



Technical Manager: Jeong Ryeol Baik



■ **Result**

Heavy metal

Item(s)	Unit	Test Method	MDL	Result
Cadmium (Cd)	mg/kg	IEC 62321-5 : 2013, ICP-OES.	1	N.D.
Lead (Pb)	mg/kg		5	N.D.
Mercury (Hg)	mg/kg	IEC 62321-4 : 2017, ICP-OES.	5	N.D.
Hexavalent Chromium (Cr ⁶⁺)	µg/cm ²	IEC 62321-7-1 : 2015, UV-VIS.	0.1	Negative

* Note :

MDL = Method detection limit

N.D. = Not detected

Negative = Undetectable / Positive = Detectable

mg/kg = ppm (part per million)

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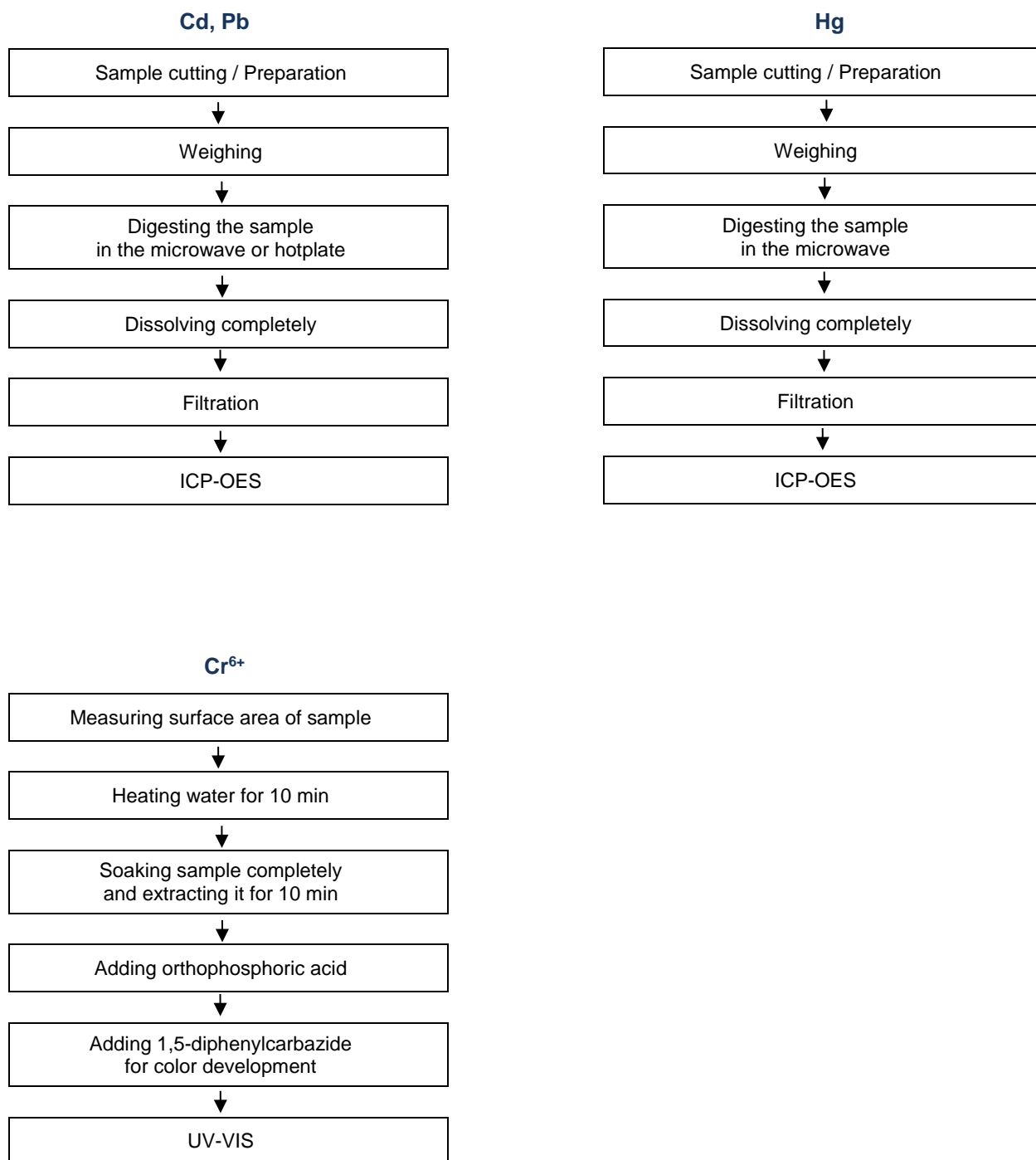
Tested by Na Rae Kim and(or) Hyae Yeon Yoo

■ Photograph



The tested sample is marked by an arrow if it's shown on the photograph.

■ Flow chart



- E N D -

Applicant : Santon International bv
Hekendorpstraat 69 ● 3079 DX Rotterdam The Netherlands

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

Sample Name : Driving shaft

Sample ID/Description : -

Date of receipt : Mar 05, 2019

Test Period : Mar 05 ~ 11, 2019

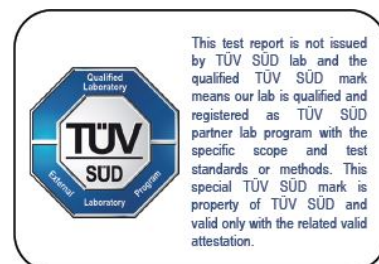
Date of issue : Mar 11, 2019

For further details, please refer to the following pages.

Approved by :



Technical Manager: Jeong Ryeol Baik



■ Result

Heavy metal

Item(s)	Unit	Test Method	MDL	Result
Cadmium (Cd)	mg/kg	IEC 62321-5 : 2013, ICP-OES.	1	N.D.
Lead (Pb)	mg/kg		5	N.D.
Mercury (Hg)	mg/kg	IEC 62321-4 : 2017, ICP-OES.	5	N.D.
Hexavalent Chromium (Cr ⁶⁺)	µg/cm ²	IEC 62321-7-1 : 2015, UV-VIS.	0.1	Negative

* Note :

MDL = Method detection limit

N.D. = Not detected

Negative = Undetectable / Positive = Detectable

mg/kg = ppm (part per million)

If the star mark (*) is shown on the item, it isn't the scope recognized by TÜV SÜD.

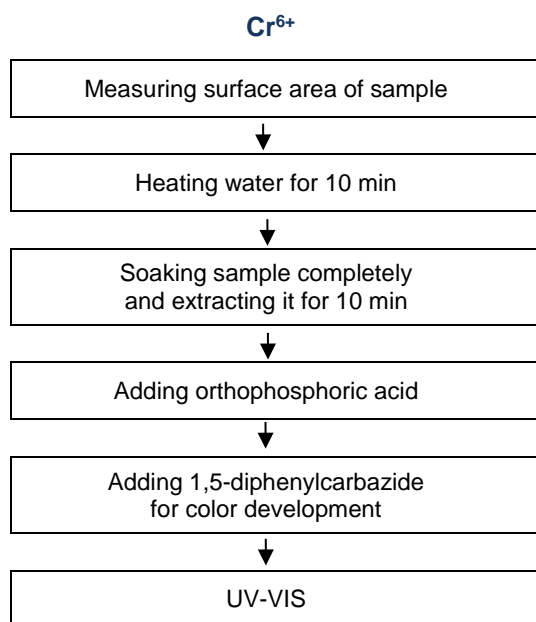
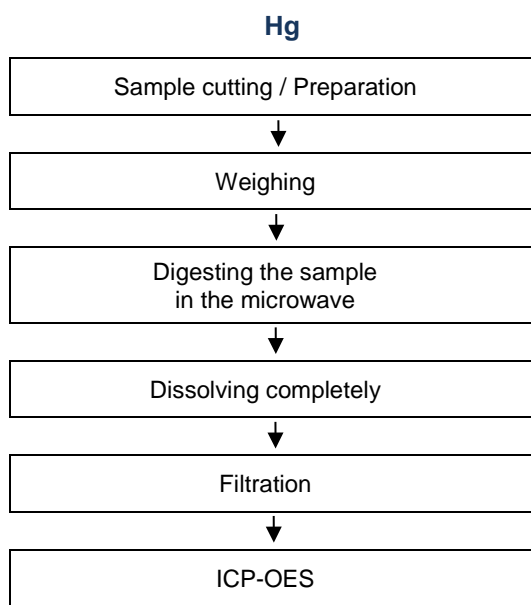
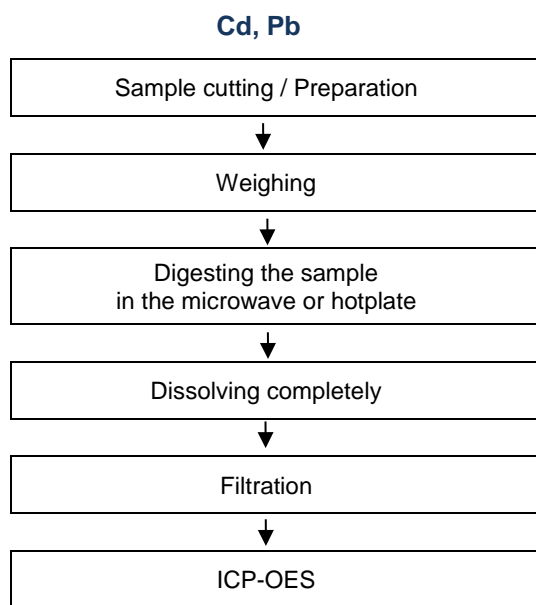
Tested by Na Rae Kim and(or) Hyae Yeon Yoo

■ Photograph



The tested sample is marked by an arrow if it's shown on the photograph.

■ Flow chart



- E N D -

Applicant : Santon International bv
Hekendorpstraat 69 ● 3079 DX Rotterdam The Netherlands

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

Sample Name : Driving pin

Sample ID/Description : -

Date of receipt : Mar 05, 2019

Test Period : Mar 05 ~ 11, 2019

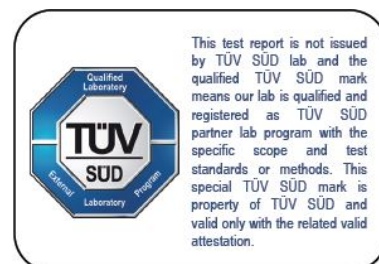
Date of issue : Mar 11, 2019

For further details, please refer to the following pages.

Approved by :



Technical Manager: Jeong Ryeol Baik



■ **Result**

Heavy metal

Item(s)	Unit	Test Method	MDL	Result
Cadmium (Cd)	mg/kg	IEC 62321-5 : 2013, ICP-OES.	1	N.D.
Lead (Pb)	mg/kg		5	N.D.
Mercury (Hg)	mg/kg	IEC 62321-4 : 2017, ICP-OES.	5	N.D.
Hexavalent Chromium (Cr ⁶⁺)	µg/cm ²	IEC 62321-7-1 : 2015, UV-VIS.	0.1	Negative

* Note :

MDL = Method detection limit

N.D. = Not detected

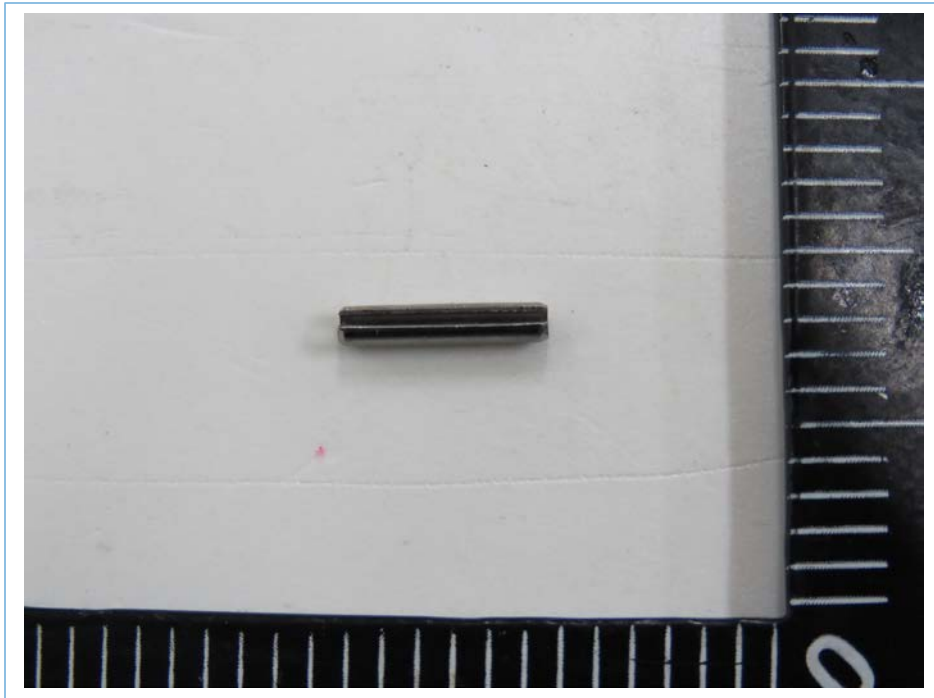
Negative = Undetectable / Positive = Detectable

mg/kg = ppm (part per million)

If the star mark (*) is shown on the item, it isn't the scope recognized by TÜV SÜD.

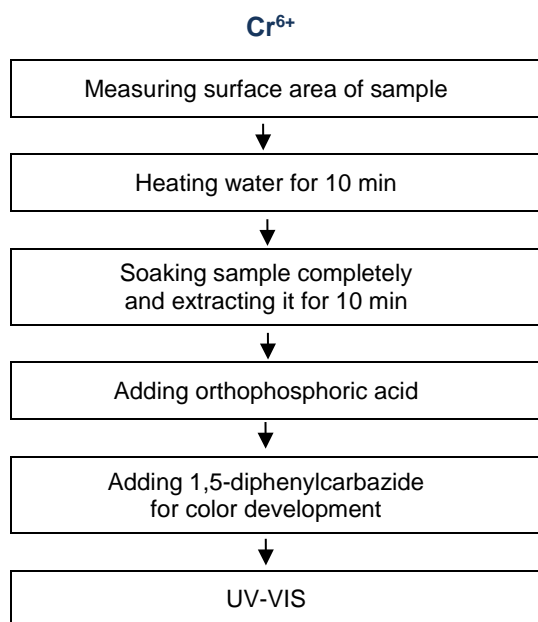
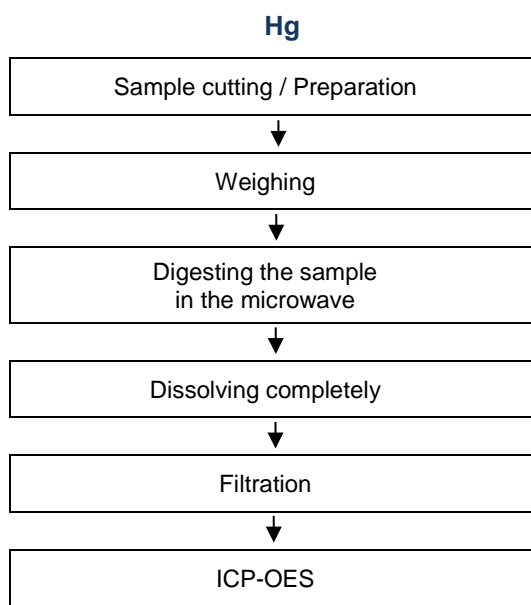
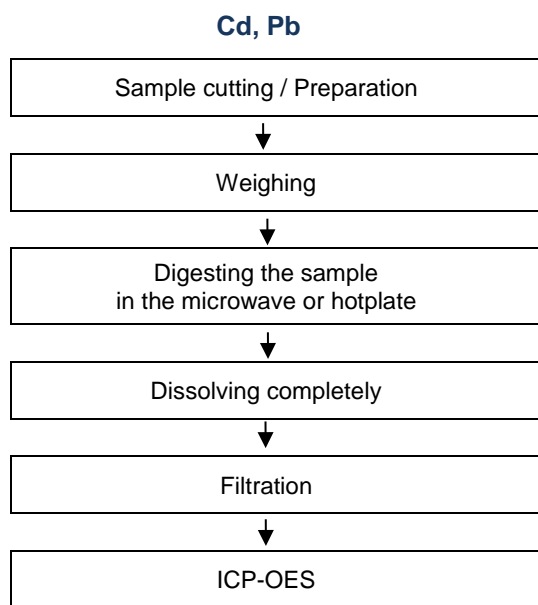
Tested by Na Rae Kim and(or) Hyae Yeon Yoo

■ Photograph



The tested sample is marked by an arrow if it's shown on the photograph.

■ Flow chart



- E N D -

Applicant : Santon International bv
Hekendorpstraat 69 ● 3079 DX Rotterdam The Netherlands

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

Sample Name : Terminal screw assembly

Sample ID/Description : -

Date of receipt : Mar 05, 2019

Test Period : Mar 05 ~ 11, 2019

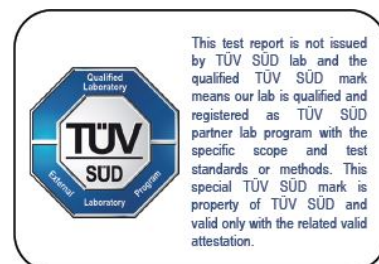
Date of issue : Mar 11, 2019

For further details, please refer to the following pages.

Approved by :



Technical Manager: Jeong Ryeol Baik



■ **Result**

Heavy metal

Item(s)	Unit	Test Method	MDL	Result
Cadmium (Cd)	mg/kg	IEC 62321-5 : 2013, ICP-OES.	1	N.D.
Lead (Pb)	mg/kg		5	N.D.
Mercury (Hg)	mg/kg	IEC 62321-4 : 2017, ICP-OES.	5	N.D.
Hexavalent Chromium (Cr ⁶⁺)	µg/cm ²	IEC 62321-7-1 : 2015, UV-VIS.	0.1	Negative

* Note :

MDL = Method detection limit

N.D. = Not detected

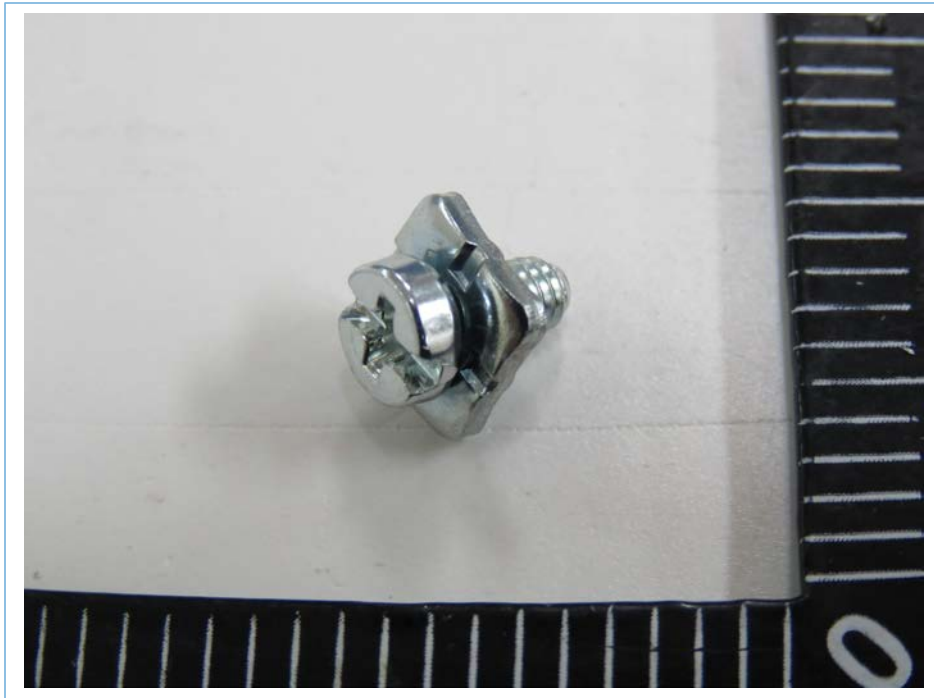
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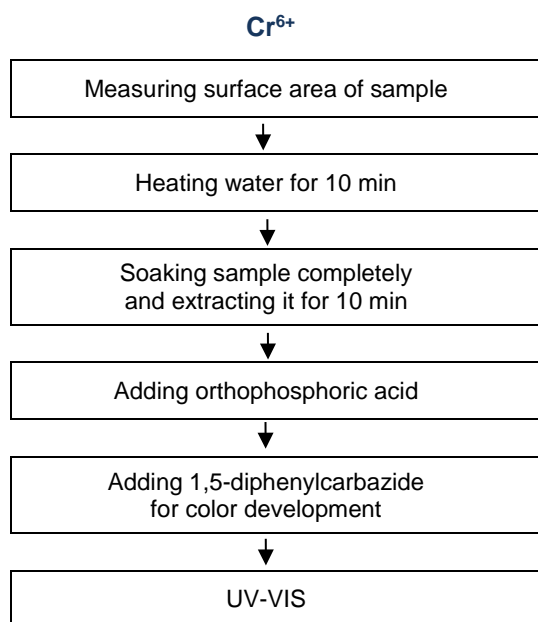
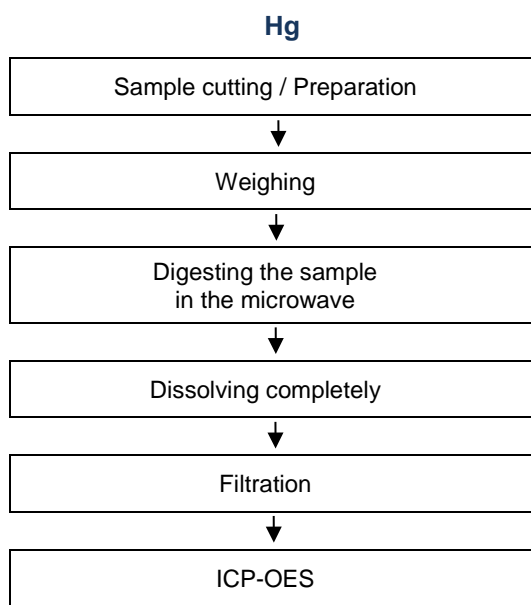
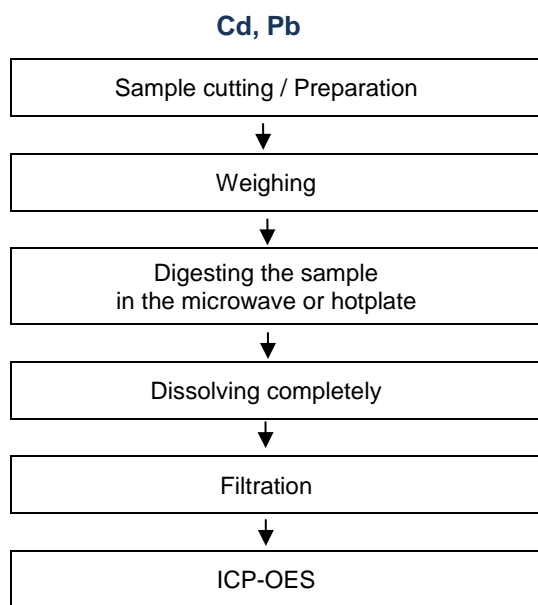
Tested by Na Rae Kim and(or) Hyae Yeon Yoo

■ Photograph



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■ Flow chart



- E N D -

Applicant : Santon International bv
Hekendorpstraat 69 ● 3079 DX Rotterdam The Netherlands

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

Sample Name : Operating spring

Sample ID/Description : -

Date of receipt : Mar 05, 2019

Test Period : Mar 05 ~ 11, 2019

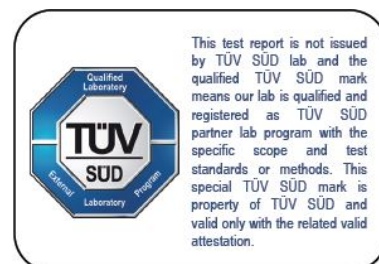
Date of issue : Mar 11, 2019

For further details, please refer to the following pages.

Approved by :



Technical Manager: Jeong Ryeol Baik



■ **Result**

Heavy metal

Item(s)	Unit	Test Method	MDL	Result
Cadmium (Cd)	mg/kg	IEC 62321-5 : 2013, ICP-OES.	1	N.D.
Lead (Pb)	mg/kg		5	N.D.
Mercury (Hg)	mg/kg	IEC 62321-4 : 2017, ICP-OES.	5	N.D.
Hexavalent Chromium (Cr ⁶⁺)	µg/cm ²	IEC 62321-7-1 : 2015, UV-VIS.	0.1	Negative

* Note :

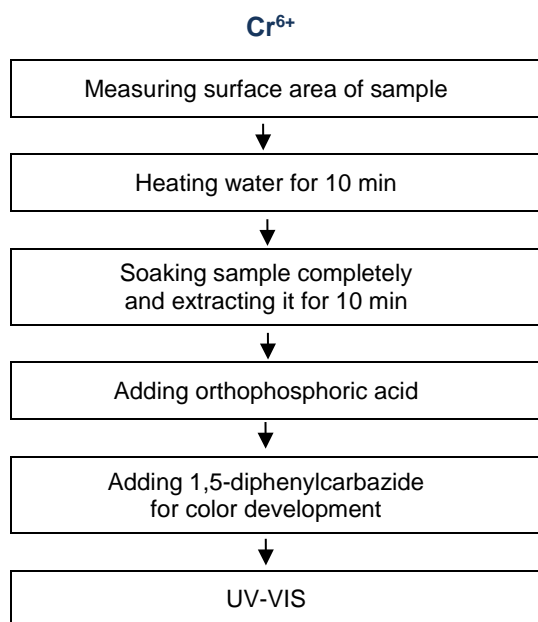
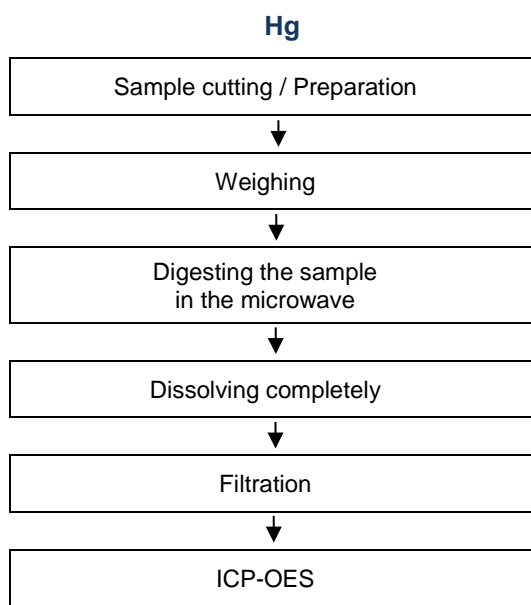
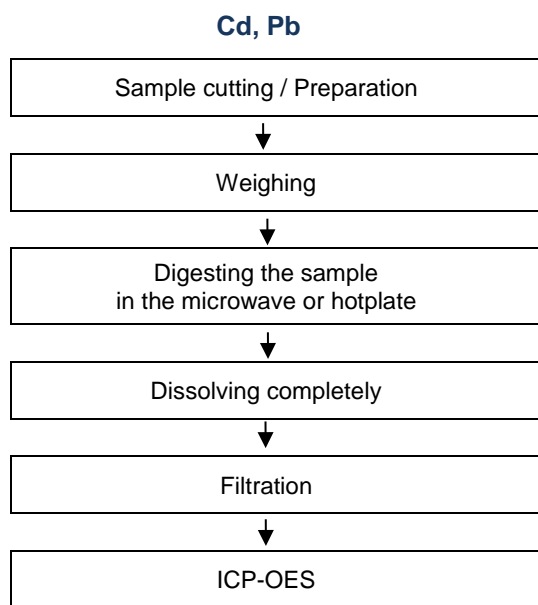
MDL = Method detection limit
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 mg/kg = ppm (part per million)
 If the star mark (*) is shown on the item, it isn't the scope recognized by TÜV SÜD.
 Tested by Na Rae Kim and(or) Hyae Yeon Yoo

■ Photograph



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■ Flow chart



- E N D -

Applicant : Santon International bv
Hekendorpstraat 69 ● 3079 DX Rotterdam The Netherlands

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

Sample Name : Terminal

Sample ID/Description : -

Date of receipt : Mar 05, 2019

Test Period : Mar 05 ~ 11, 2019

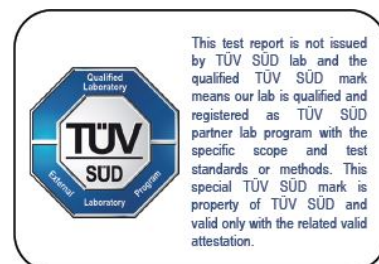
Date of issue : Mar 11, 2019

For further details, please refer to the following pages.

Approved by :



Technical Manager: Jeong Ryeol Baik



■ **Result**

Heavy metal

Item(s)	Unit	Test Method	MDL	Result
Cadmium (Cd)	mg/kg	IEC 62321-5 : 2013, ICP-OES.	1	N.D.
Lead (Pb)	mg/kg		5	N.D.
Mercury (Hg)	mg/kg	IEC 62321-4 : 2017, ICP-OES.	5	N.D.
Hexavalent Chromium (Cr ⁶⁺)	µg/cm ²	IEC 62321-7-1 : 2015, UV-VIS.	0.1	Negative

* Note :

MDL = Method detection limit

N.D. = Not detected

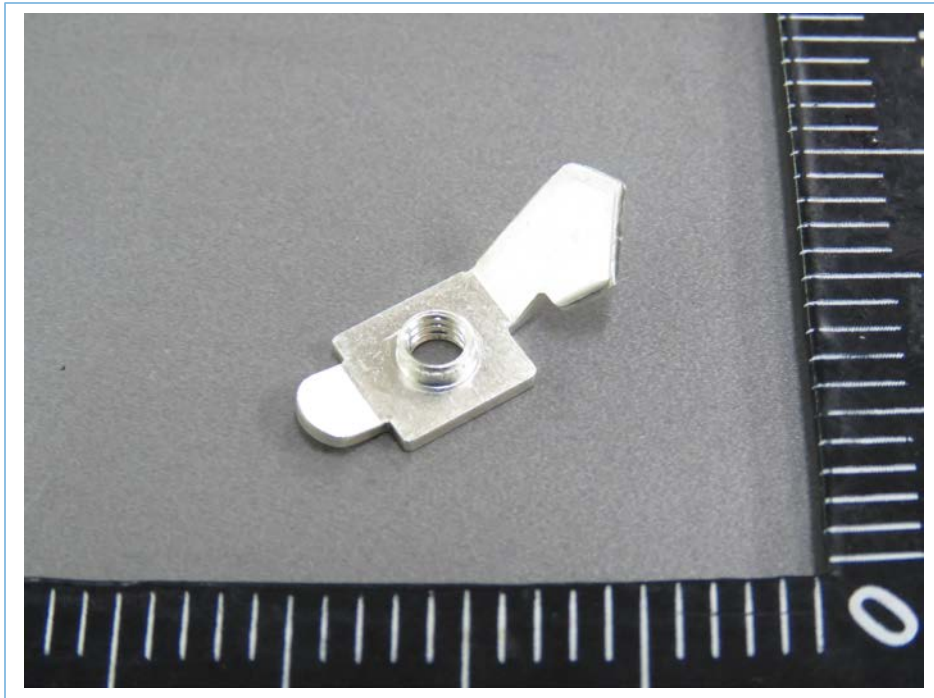
Negative = Undetectable / Positive = Detectable

mg/kg = ppm (part per million)

If the star mark (*) is shown on the item, it isn't the scope recognized by TÜV SÜD.

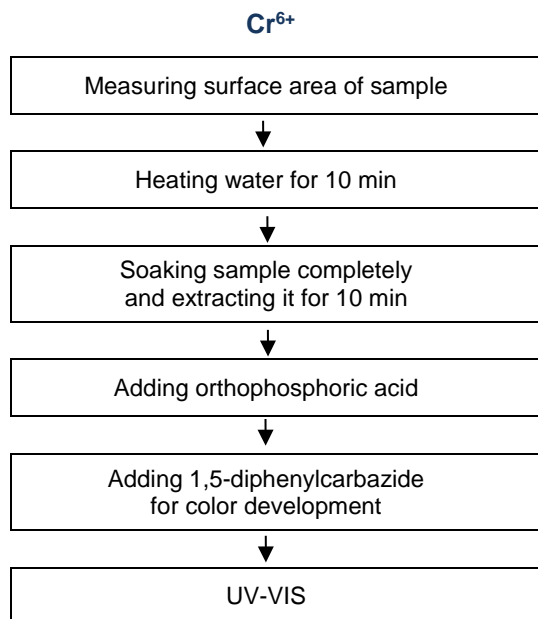
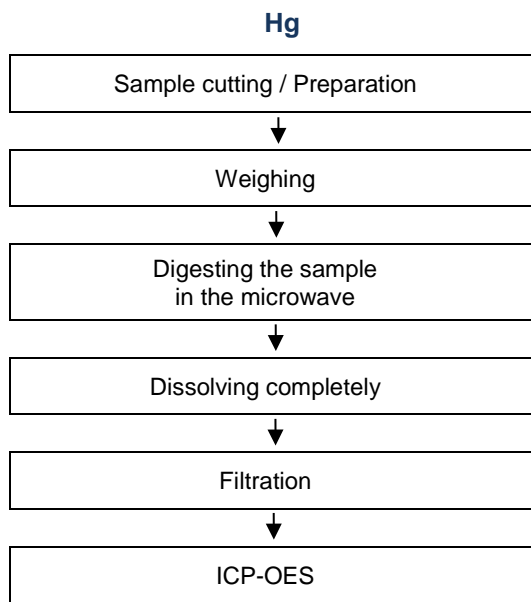
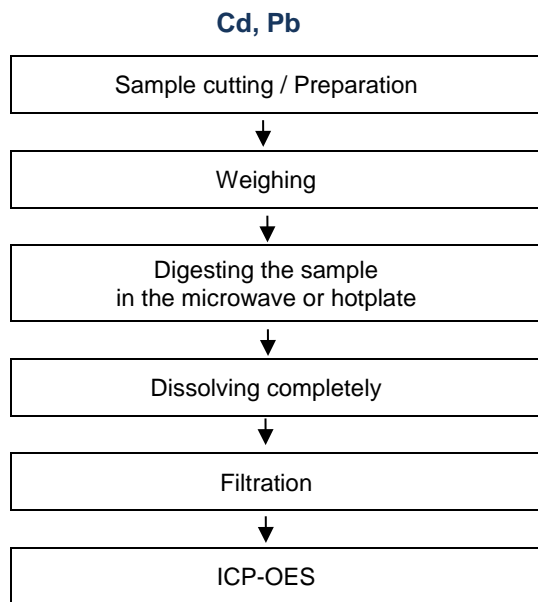
Tested by Na Rae Kim and(or) Hyae Yeon Yoo

■ Photograph



The tested sample is marked by an arrow if it's shown on the photograph.

■ Flow chart



- E N D -

Applicant : Santon International bv
Hekendorpstraat 69 ● 3079 DX Rotterdam The Netherlands

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

Sample Name : Conductor assy

Sample ID/Description : -

Date of receipt : Mar 05, 2019

Test Period : Mar 05 ~ 11, 2019

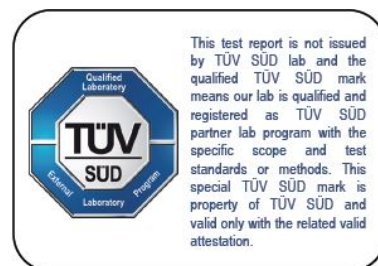
Date of issue : Mar 11, 2019

For further details, please refer to the following pages.

Approved by :



Technical Manager: Jeong Ryeol Baik



■ **Result**

Heavy metal

Item(s)	Unit	Test Method	MDL	Result
Cadmium (Cd)	mg/kg	IEC 62321-5 : 2013, ICP-OES.	1	N.D.
Lead (Pb)	mg/kg		5	N.D.
Mercury (Hg)	mg/kg	IEC 62321-4 : 2017, ICP-OES.	5	N.D.
Hexavalent Chromium (Cr ⁶⁺)	µg/cm ²	IEC 62321-7-1 : 2015, UV-VIS.	0.1	Negative

* Note :

MDL = Method detection limit

N.D. = Not detected

Negative = Undetectable / Positive = Detectable

mg/kg = ppm (part per million)

If the star mark (*) is shown on the item, it isn't the scope recognized by TÜV SÜD.

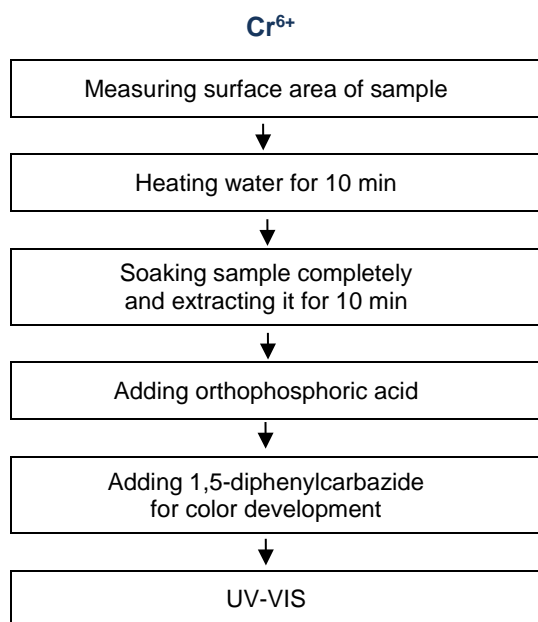
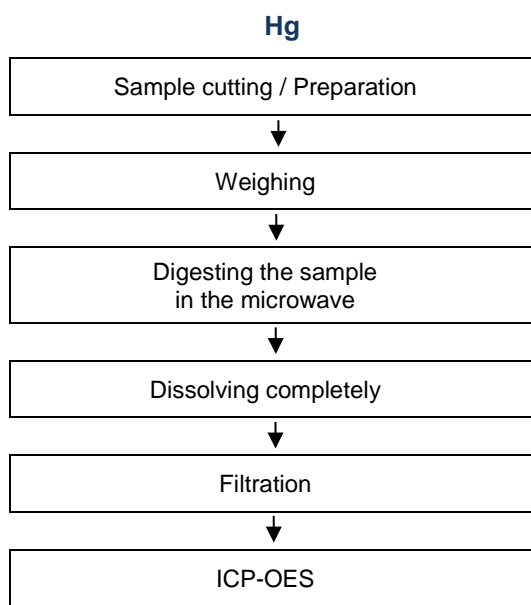
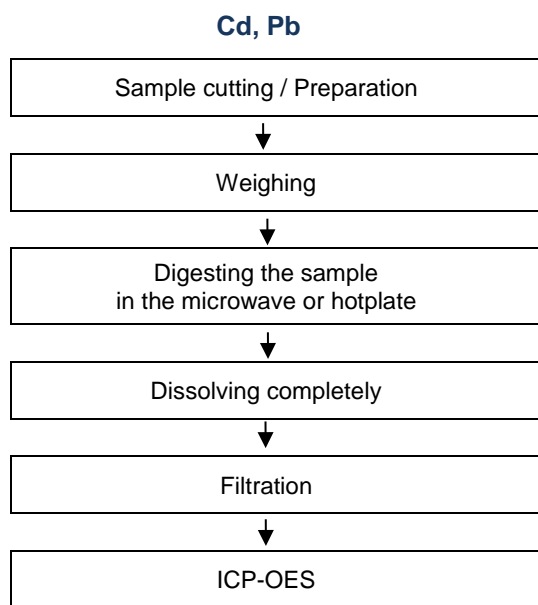
Tested by Na Rae Kim and(or) Hyae Yeon Yoo

■ Photograph



The tested sample is marked by an arrow if it's shown on the photograph.

■ Flow chart



- E N D -

Applicant : Santon International bv
Hekendorpstraat 69 ● 3079 DX Rotterdam The Netherlands

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

Sample Name : Top plate

Sample ID/Description : -

Date of receipt : Mar 05, 2019

Test Period : Mar 05 ~ 11, 2019

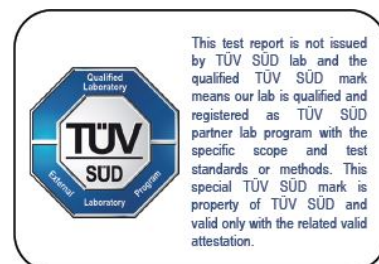
Date of issue : Mar 11, 2019

For further details, please refer to the following pages.

Approved by :



Technical Manager: Jeong Ryeol Baik



■ **Result**

Polybrominated biphenyls (PBBs)

Item(s)	Unit	Test Method	MDL	Result
Monobromobiphenyl	mg/kg	IEC 62321-6 : 2015, GC-MS.	5	N.D.
Dibromobiphenyl	mg/kg		5	N.D.
Tribromobiphenyl	mg/kg		5	N.D.
Tetrabromobiphenyl	mg/kg		5	N.D.
Pentabromobiphenyl	mg/kg		5	N.D.
Hexabromobiphenyl	mg/kg		5	N.D.
Heptabromobiphenyl	mg/kg		5	N.D.
Octabromobiphenyl	mg/kg		5	N.D.
Nonabromobiphenyl	mg/kg		5	N.D.
Decabromobiphenyl	mg/kg		5	N.D.

Polybrominated diphenyl ethers (PBDEs)

Item(s)	Unit	Test Method	MDL	Result
Monobromodiphenyl ether	mg/kg	IEC 62321-6 : 2015, GC-MS.	5	N.D.
Dibromodiphenyl ether	mg/kg		5	N.D.
Tribromodiphenyl ether	mg/kg		5	N.D.
Tetrabromodiphenyl ether	mg/kg		5	N.D.
Pentabromodiphenyl ether	mg/kg		5	N.D.
Hexabromodiphenyl ether	mg/kg		5	N.D.
Heptabromodiphenyl ether	mg/kg		5	N.D.
Octabromodiphenyl ether	mg/kg		5	N.D.
Nonabromodiphenyl ether	mg/kg		5	N.D.
Decabromodiphenyl ether	mg/kg		5	N.D.

■ **Result**

Heavy metal

Item(s)	Unit	Test Method	MDL	Result
Cadmium (Cd)	mg/kg	IEC 62321-5 : 2013, ICP-OES.	1	N.D.
Lead (Pb)	mg/kg		5	N.D.
Mercury (Hg)	mg/kg	IEC 62321-4 : 2017, ICP-OES.	5	N.D.
Hexavalent Chromium (Cr ⁶⁺)	mg/kg	IEC 62321-7-2 : 2017, UV-VIS.	1	N.D.

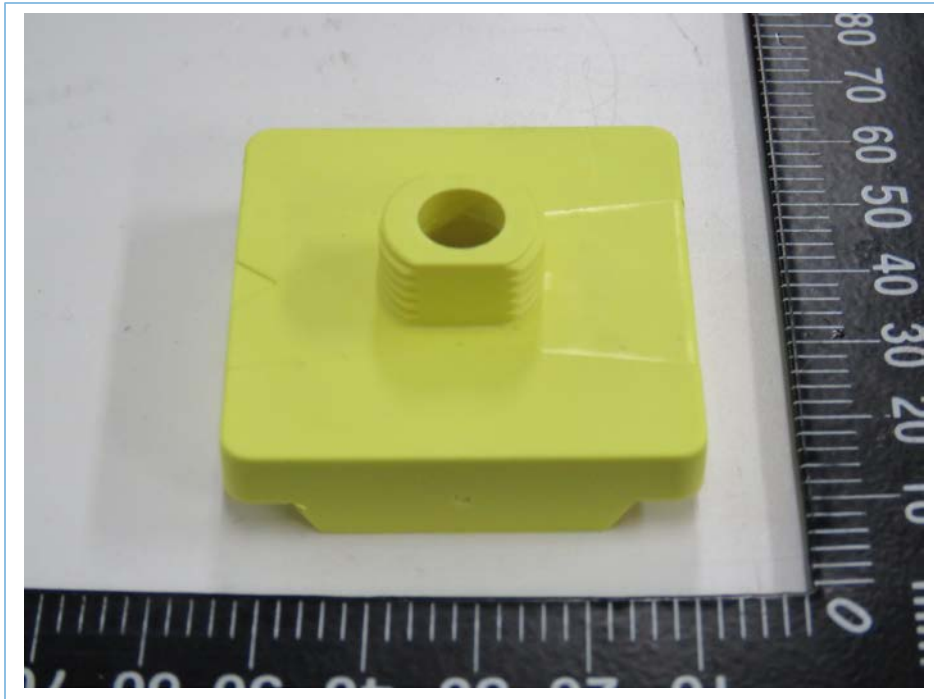
Phthalate

Item(s)	CAS No.	Unit	Test Method	MDL	Result
Diisobutyl phthalate (DIBP)	84-69-5	mg/kg	IEC 62321-8 : 2017, GC-MS.	50	N.D.
Di-n-butyl phthalate (DBP)	84-74-2	mg/kg		50	N.D.
Benzyl butyl phthalate (BBP)	85-68-7	mg/kg		50	N.D.
Di(2-ethyl hexyl) phthalate (DEHP)	117-81-7	mg/kg		50	N.D.

* Note :

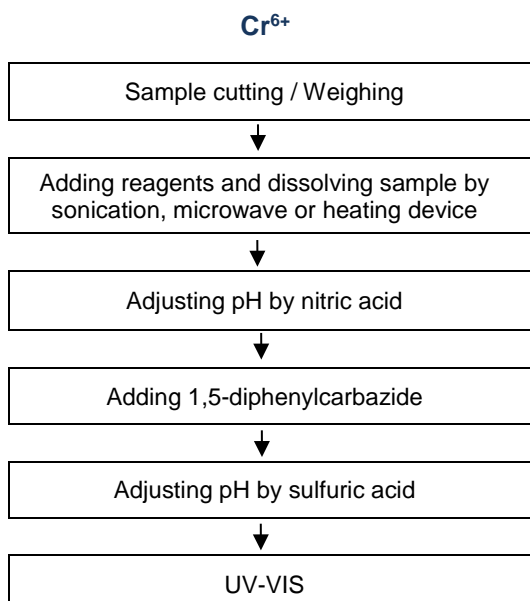
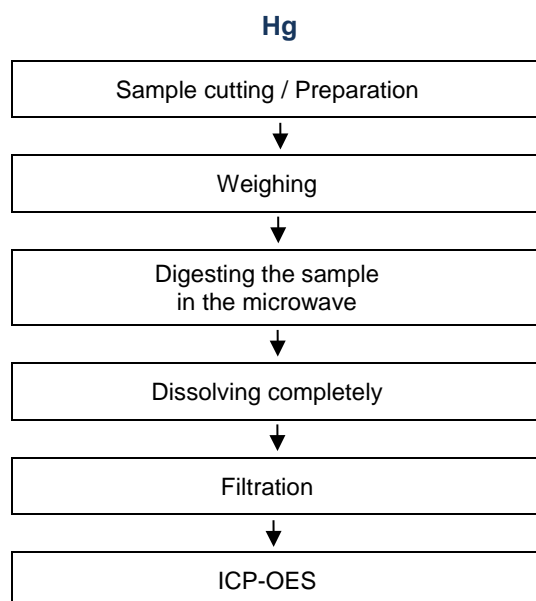
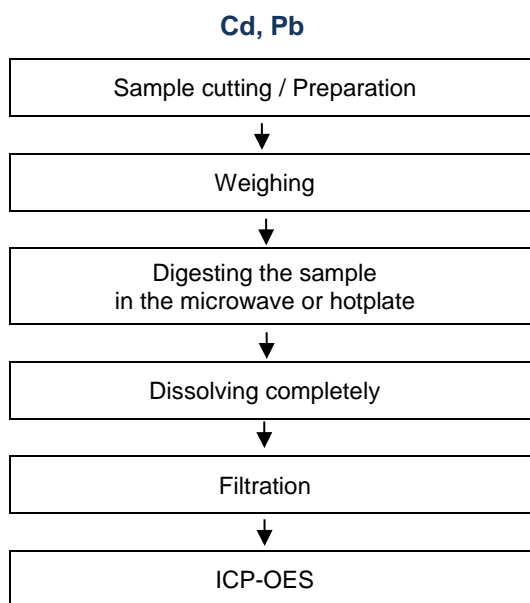
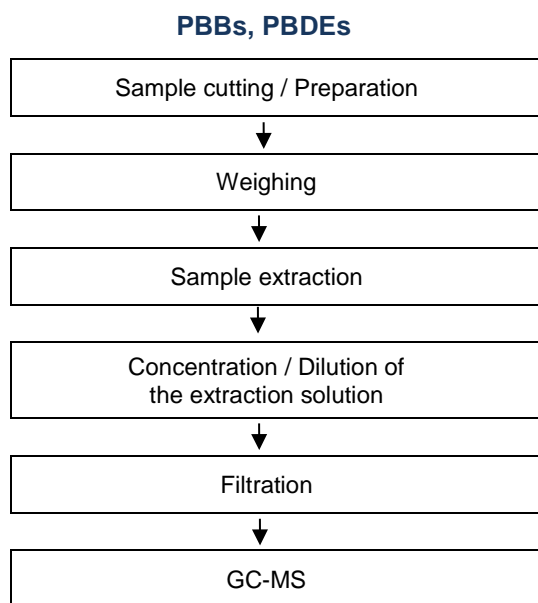
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 N.D. = Not detected
 Negative = Undetectable / Positive = Detectable
 mg/kg = ppm (part per million)
 If the star mark (*) is shown on the item, it isn't the scope recognized by TÜV SÜD.
 Tested by Na Rae Kim and(or) Hyae Yeon Yoo

■ Photograph

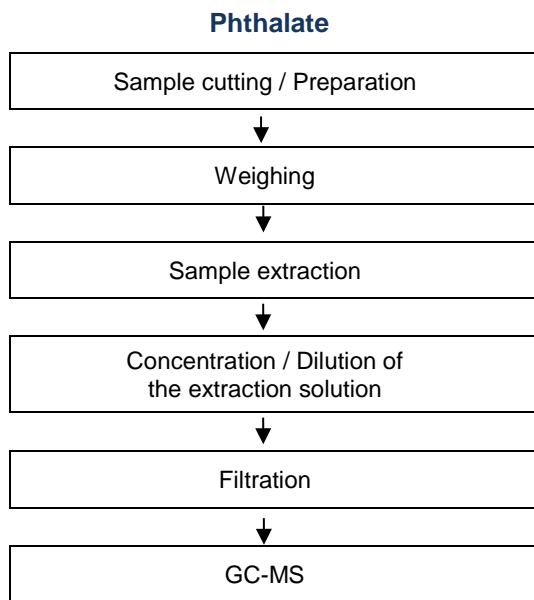


The tested sample is marked by an arrow if it's shown on the photograph.

■ Flow chart



■ Flow chart



- E N D -

Applicant : Santon International bv
Hekendorpstraat 69 ● 3079 DX Rotterdam The Netherlands

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

Sample Name : Conductor Isolator

Sample ID/Description : -

Date of receipt : Mar 05, 2019

Test Period : Mar 05 ~ 11, 2019

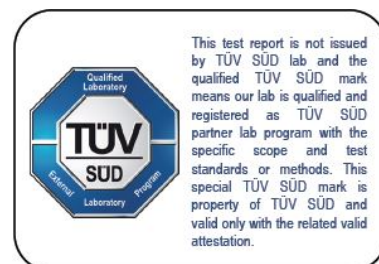
Date of issue : Mar 11, 2019

For further details, please refer to the following pages.

Approved by :



Technical Manager: Jeong Ryeol Baik



■ **Result**

Polybrominated biphenyls (PBBs)

Item(s)	Unit	Test Method	MDL	Result
Monobromobiphenyl	mg/kg	IEC 62321-6 : 2015, GC-MS.	5	N.D.
Dibromobiphenyl	mg/kg		5	N.D.
Tribromobiphenyl	mg/kg		5	N.D.
Tetrabromobiphenyl	mg/kg		5	N.D.
Pentabromobiphenyl	mg/kg		5	N.D.
Hexabromobiphenyl	mg/kg		5	N.D.
Heptabromobiphenyl	mg/kg		5	N.D.
Octabromobiphenyl	mg/kg		5	N.D.
Nonabromobiphenyl	mg/kg		5	N.D.
Decabromobiphenyl	mg/kg		5	N.D.

Polybrominated diphenyl ethers (PBDEs)

Item(s)	Unit	Test Method	MDL	Result
Monobromodiphenyl ether	mg/kg	IEC 62321-6 : 2015, GC-MS.	5	N.D.
Dibromodiphenyl ether	mg/kg		5	N.D.
Tribromodiphenyl ether	mg/kg		5	N.D.
Tetrabromodiphenyl ether	mg/kg		5	N.D.
Pentabromodiphenyl ether	mg/kg		5	N.D.
Hexabromodiphenyl ether	mg/kg		5	N.D.
Heptabromodiphenyl ether	mg/kg		5	N.D.
Octabromodiphenyl ether	mg/kg		5	N.D.
Nonabromodiphenyl ether	mg/kg		5	N.D.
Decabromodiphenyl ether	mg/kg		5	N.D.

■ Result

Heavy metal

Item(s)	Unit	Test Method	MDL	Result
Cadmium (Cd)	mg/kg	IEC 62321-5 : 2013, ICP-OES.	1	N.D.
Lead (Pb)	mg/kg		5	N.D.
Mercury (Hg)	mg/kg	IEC 62321-4 : 2017, ICP-OES.	5	N.D.
Hexavalent Chromium (Cr ⁶⁺)	mg/kg	IEC 62321-7-2 : 2017, UV-VIS.	1	N.D.

Phthalate

Item(s)	CAS No.	Unit	Test Method	MDL	Result
Diisobutyl phthalate (DIBP)	84-69-5	mg/kg	IEC 62321-8 : 2017, GC-MS.	50	N.D.
Di-n-butyl phthalate (DBP)	84-74-2	mg/kg		50	N.D.
Benzyl butyl phthalate (BBP)	85-68-7	mg/kg		50	N.D.
Di(2-ethyl hexyl) phthalate (DEHP)	117-81-7	mg/kg		50	N.D.

* Note :

MDL = Method detection limit

N.D. = Not detected

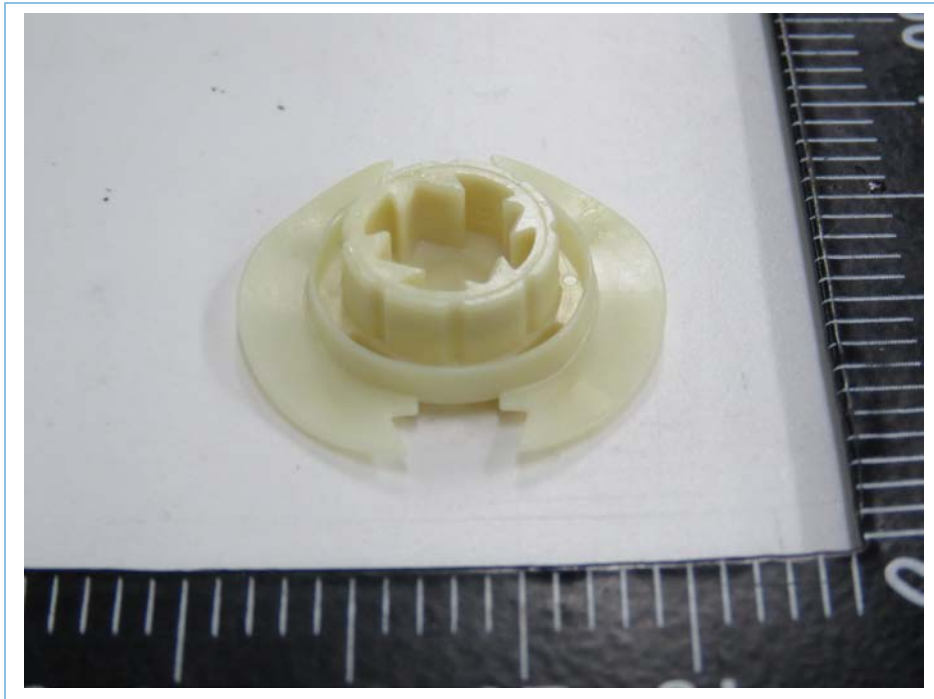
Negative = Undetectable / Positive = Detectable

mg/kg = ppm (part per million)

If the star mark (*) is shown on the item, it isn't the scope recognized by TÜV SÜD.

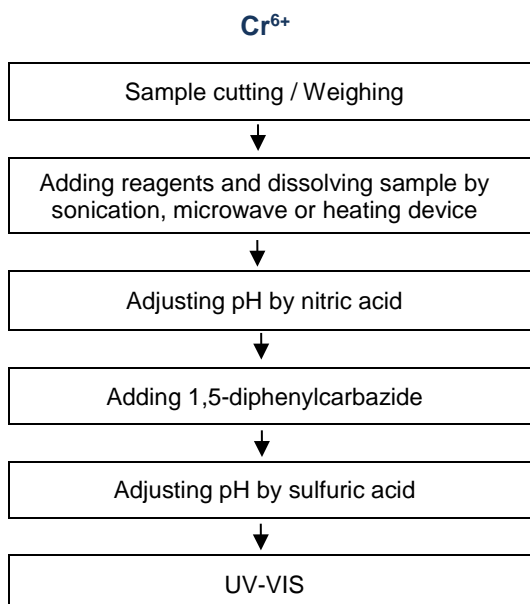
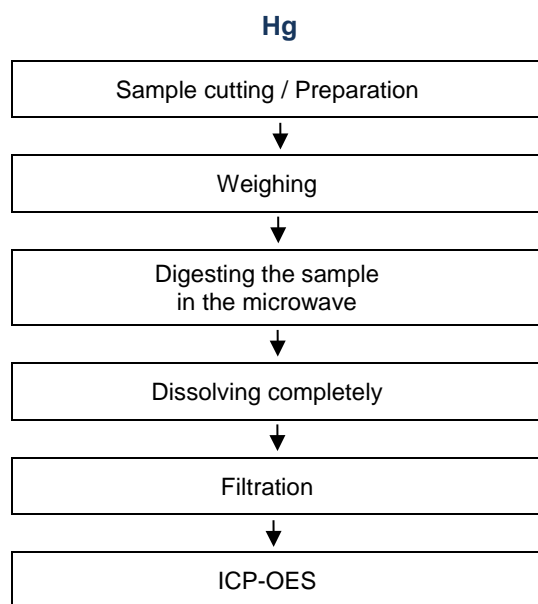
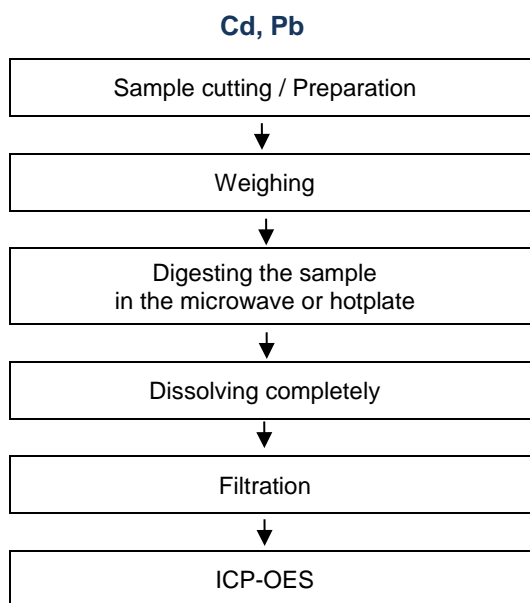
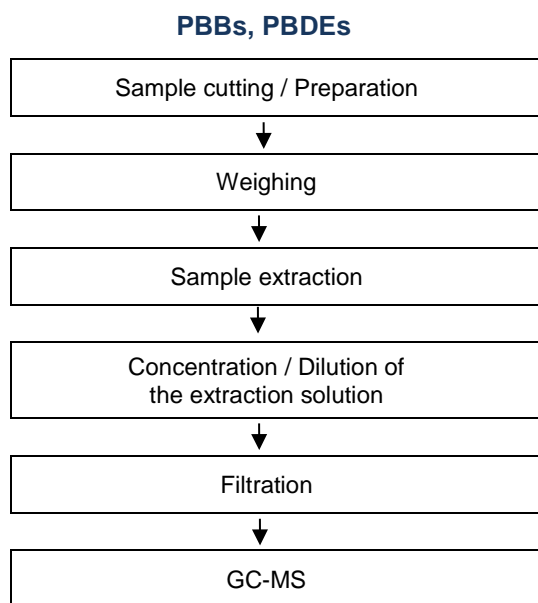
Tested by Na Rae Kim and(or) Hyae Yeon Yoo

■ Photograph

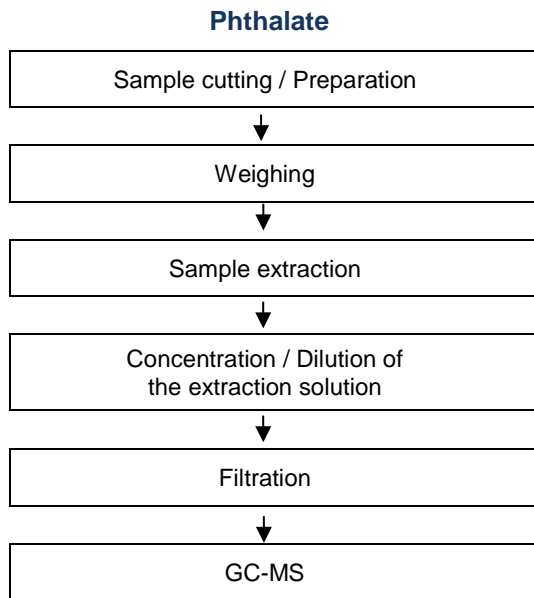


The tested sample is marked by an arrow if it's shown on the photograph.

■ Flow chart



■ Flow chart



- E N D -

Applicant : Santon International bv
Hekendorpstraat 69 ● 3079 DX Rotterdam The Netherlands

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

Sample Name : Locking disk

Sample ID/Description : -

Date of receipt : Mar 05, 2019

Test Period : Mar 05 ~ 11, 2019

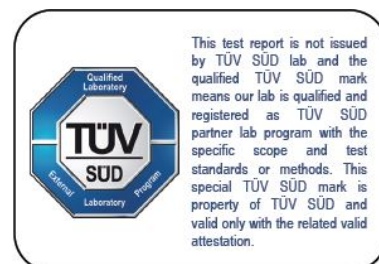
Date of issue : Mar 11, 2019

For further details, please refer to the following pages.

Approved by :



Technical Manager: Jeong Ryeol Baik



■ **Result**

Polybrominated biphenyls (PBBs)

Item(s)	Unit	Test Method	MDL	Result
Monobromobiphenyl	mg/kg	IEC 62321-6 : 2015, GC-MS.	5	N.D.
Dibromobiphenyl	mg/kg		5	N.D.
Tribromobiphenyl	mg/kg		5	N.D.
Tetrabromobiphenyl	mg/kg		5	N.D.
Pentabromobiphenyl	mg/kg		5	N.D.
Hexabromobiphenyl	mg/kg		5	N.D.
Heptabromobiphenyl	mg/kg		5	N.D.
Octabromobiphenyl	mg/kg		5	N.D.
Nonabromobiphenyl	mg/kg		5	N.D.
Decabromobiphenyl	mg/kg		5	N.D.

Polybrominated diphenyl ethers (PBDEs)

Item(s)	Unit	Test Method	MDL	Result
Monobromodiphenyl ether	mg/kg	IEC 62321-6 : 2015, GC-MS.	5	N.D.
Dibromodiphenyl ether	mg/kg		5	N.D.
Tribromodiphenyl ether	mg/kg		5	N.D.
Tetrabromodiphenyl ether	mg/kg		5	N.D.
Pentabromodiphenyl ether	mg/kg		5	N.D.
Hexabromodiphenyl ether	mg/kg		5	N.D.
Heptabromodiphenyl ether	mg/kg		5	N.D.
Octabromodiphenyl ether	mg/kg		5	N.D.
Nonabromodiphenyl ether	mg/kg		5	N.D.
Decabromodiphenyl ether	mg/kg		5	N.D.

■ Result

Heavy metal

Item(s)	Unit	Test Method	MDL	Result
Cadmium (Cd)	mg/kg	IEC 62321-5 : 2013, ICP-OES.	1	N.D.
Lead (Pb)	mg/kg		5	N.D.
Mercury (Hg)	mg/kg	IEC 62321-4 : 2017, ICP-OES.	5	N.D.
Hexavalent Chromium (Cr ⁶⁺)	mg/kg	IEC 62321-7-2 : 2017, UV-VIS.	1	N.D.

Phthalate

Item(s)	CAS No.	Unit	Test Method	MDL	Result
Diisobutyl phthalate (DIBP)	84-69-5	mg/kg	IEC 62321-8 : 2017, GC-MS.	50	N.D.
Di-n-butyl phthalate (DBP)	84-74-2	mg/kg		50	N.D.
Benzyl butyl phthalate (BBP)	85-68-7	mg/kg		50	N.D.
Di(2-ethyl hexyl) phthalate (DEHP)	117-81-7	mg/kg		50	N.D.

* Note :

MDL = Method detection limit

N.D. = Not detected

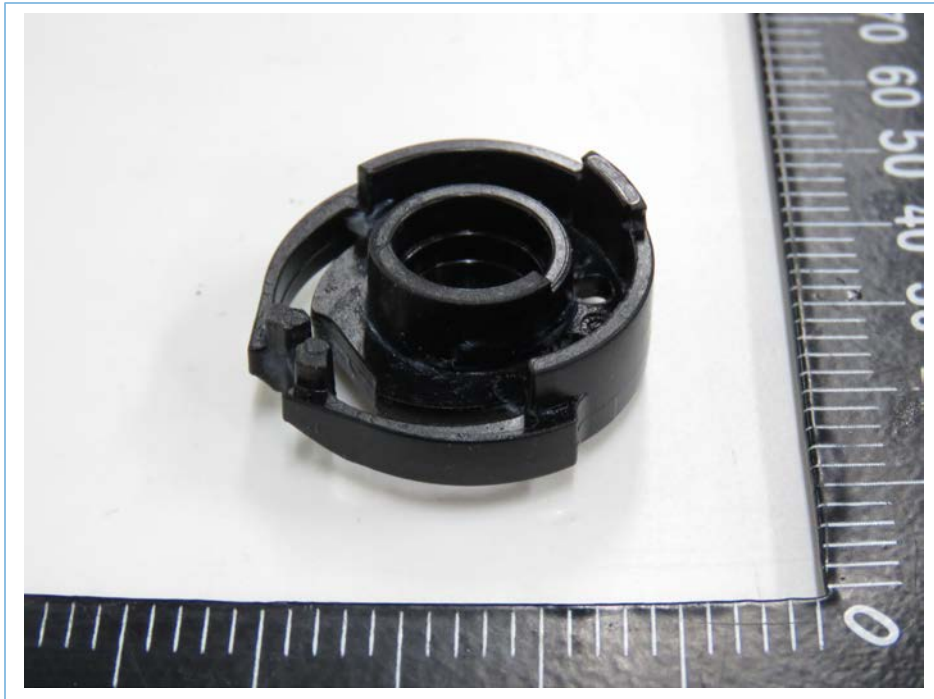
Negative = Undetectable / Positive = Detectable

mg/kg = ppm (part per million)

If the star mark (*) is shown on the item, it isn't the scope recognized by TÜV SÜD.

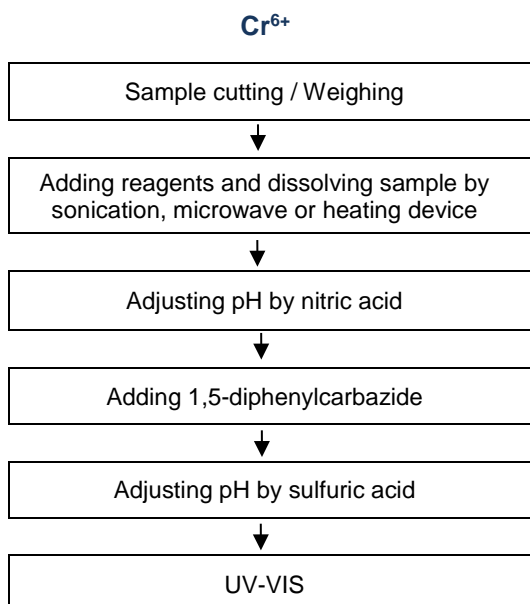
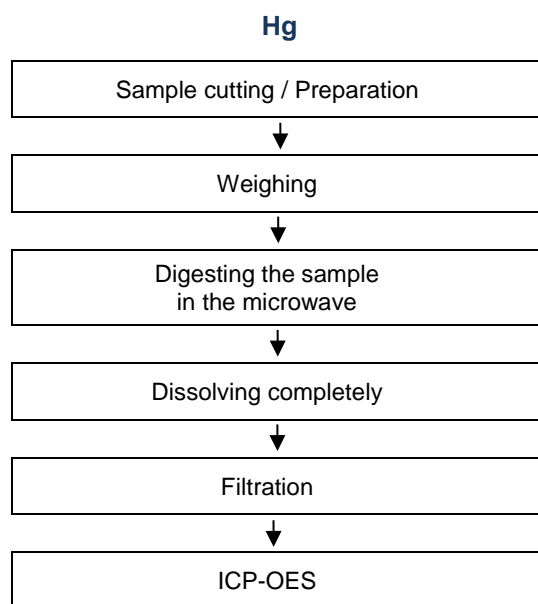
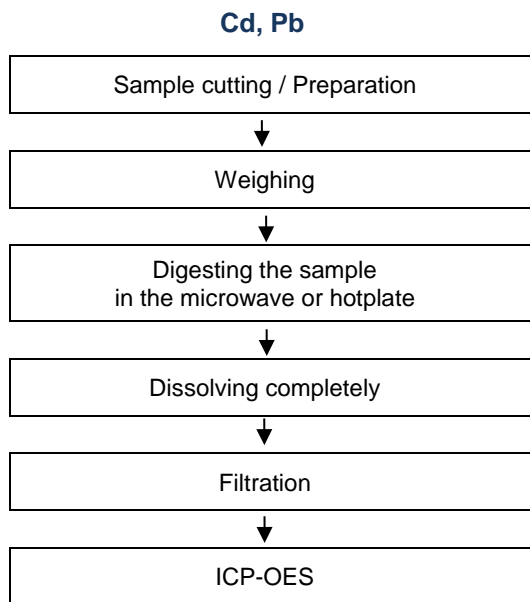
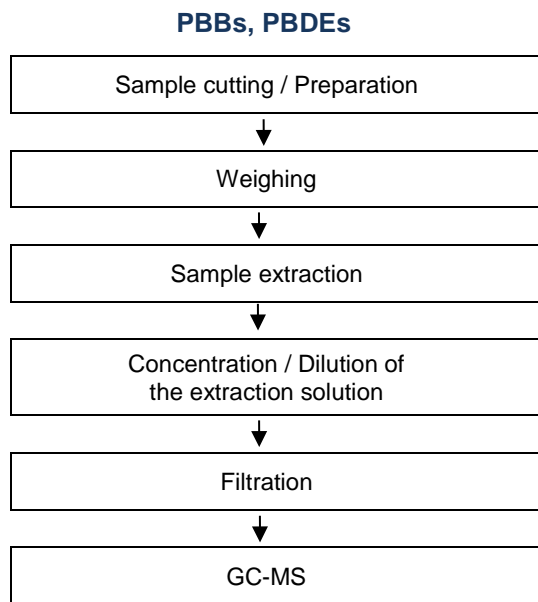
Tested by Na Rae Kim and(or) Hyae Yeon Yoo

■ Photograph

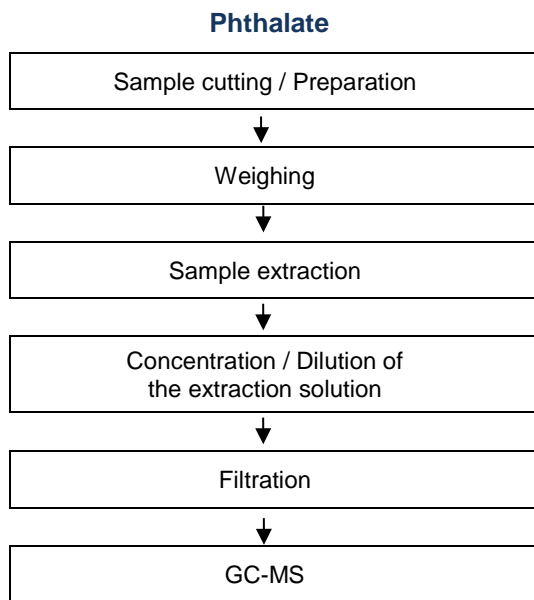


The tested sample is marked by an arrow if it's shown on the photograph.

■ Flow chart



■ Flow chart



- E N D -

Applicant : Santon International bv
Hekendorpstraat 69 ● 3079 DX Rotterdam The Netherlands

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

Sample Name : O-ring

Sample ID/Description : -

Date of receipt : Mar 05, 2019

Test Period : Mar 05 ~ 11, 2019

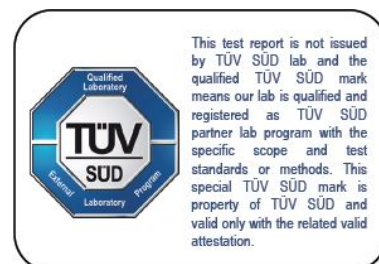
Date of issue : Mar 11, 2019

For further details, please refer to the following pages.

Approved by :



Technical Manager: Jeong Ryeol Baik



■ **Result**

Polybrominated biphenyls (PBBs)

Item(s)	Unit	Test Method	MDL	Result
Monobromobiphenyl	mg/kg	IEC 62321-6 : 2015, GC-MS.	5	N.D.
Dibromobiphenyl	mg/kg		5	N.D.
Tribromobiphenyl	mg/kg		5	N.D.
Tetrabromobiphenyl	mg/kg		5	N.D.
Pentabromobiphenyl	mg/kg		5	N.D.
Hexabromobiphenyl	mg/kg		5	N.D.
Heptabromobiphenyl	mg/kg		5	N.D.
Octabromobiphenyl	mg/kg		5	N.D.
Nonabromobiphenyl	mg/kg		5	N.D.
Decabromobiphenyl	mg/kg		5	N.D.

Polybrominated diphenyl ethers (PBDEs)

Item(s)	Unit	Test Method	MDL	Result
Monobromodiphenyl ether	mg/kg	IEC 62321-6 : 2015, GC-MS.	5	N.D.
Dibromodiphenyl ether	mg/kg		5	N.D.
Tribromodiphenyl ether	mg/kg		5	N.D.
Tetrabromodiphenyl ether	mg/kg		5	N.D.
Pentabromodiphenyl ether	mg/kg		5	N.D.
Hexabromodiphenyl ether	mg/kg		5	N.D.
Heptabromodiphenyl ether	mg/kg		5	N.D.
Octabromodiphenyl ether	mg/kg		5	N.D.
Nonabromodiphenyl ether	mg/kg		5	N.D.
Decabromodiphenyl ether	mg/kg		5	N.D.

■ **Result**

Heavy metal

Item(s)	Unit	Test Method	MDL	Result
Cadmium (Cd)	mg/kg	IEC 62321-5 : 2013, ICP-OES.	1	N.D.
Lead (Pb)	mg/kg		5	N.D.
Mercury (Hg)	mg/kg	IEC 62321-4 : 2017, ICP-OES.	5	N.D.
Hexavalent Chromium (Cr ⁶⁺)	mg/kg	IEC 62321-7-2 : 2017, UV-VIS.	1	N.D.

Phthalate

Item(s)	CAS No.	Unit	Test Method	MDL	Result
Diisobutyl phthalate (DIBP)	84-69-5	mg/kg	IEC 62321-8 : 2017, GC-MS.	50	N.D.
Di-n-butyl phthalate (DBP)	84-74-2	mg/kg		50	N.D.
Benzyl butyl phthalate (BBP)	85-68-7	mg/kg		50	N.D.
Di(2-ethyl hexyl) phthalate (DEHP)	117-81-7	mg/kg		50	N.D.

* Note :

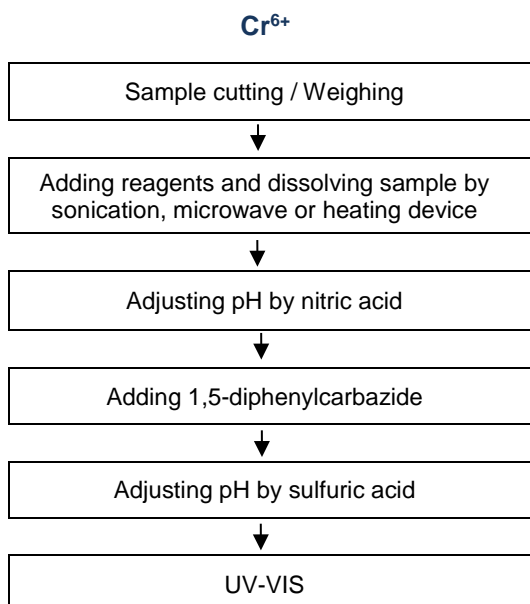
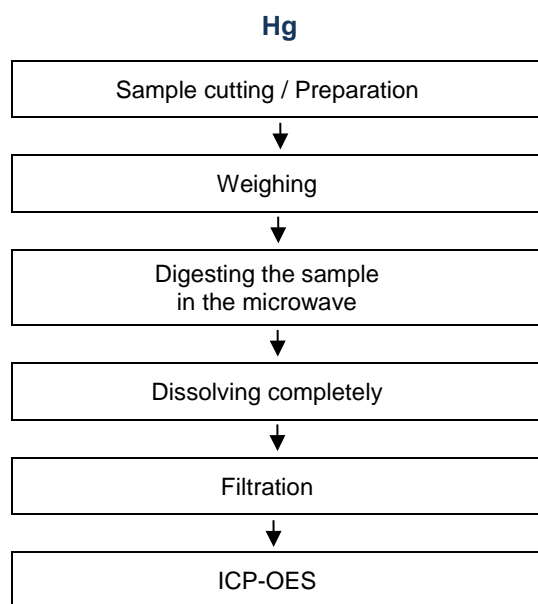
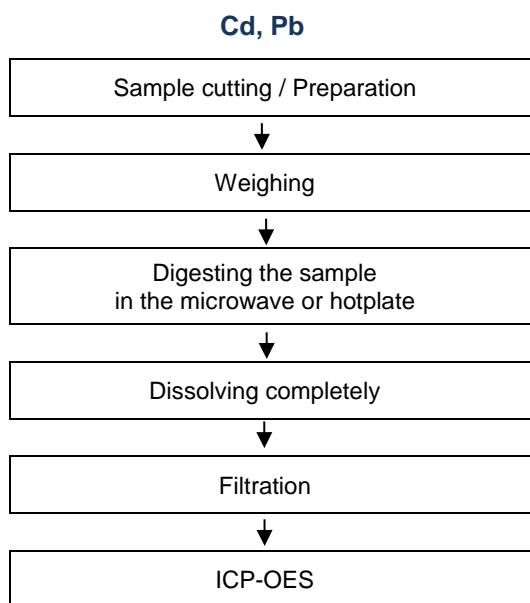
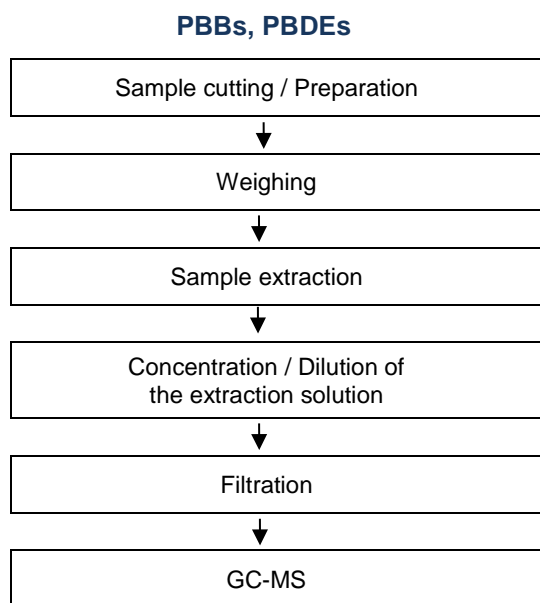
MDL = Method detection limit
 N.D. = Not detected
 Negative = Undetectable / Positive = Detectable
 mg/kg = ppm (part per million)
 If the star mark (*) is shown on the item, it isn't the scope recognized by TÜV SÜD.
 Tested by Na Rae Kim and(or) Hyae Yeon Yoo

■ Photograph

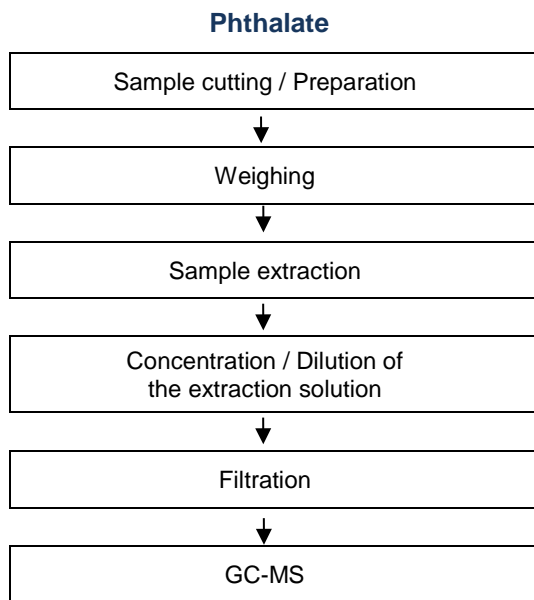


The tested sample is marked by an arrow if it's shown on the photograph.

■ Flow chart



■ Flow chart



- E N D -

Applicant : Santon International bv
Hekendorpstraat 69 ● 3079 DX Rotterdam The Netherlands

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

Sample Name : Knob

Sample ID/Description : -

Date of receipt : Mar 05, 2019

Test Period : Mar 05 ~ 11, 2019

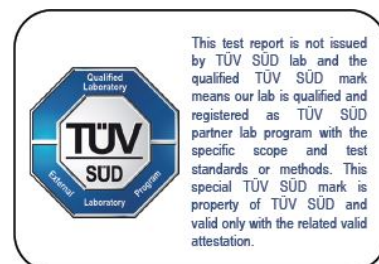
Date of issue : Mar 11, 2019

For further details, please refer to the following pages.

Approved by :



Technical Manager: Jeong Ryeol Baik



■ **Result**

Polybrominated biphenyls (PBBs)

Item(s)	Unit	Test Method	MDL	Result
Monobromobiphenyl	mg/kg	IEC 62321-6 : 2015, GC-MS.	5	N.D.
Dibromobiphenyl	mg/kg		5	N.D.
Tribromobiphenyl	mg/kg		5	N.D.
Tetrabromobiphenyl	mg/kg		5	N.D.
Pentabromobiphenyl	mg/kg		5	N.D.
Hexabromobiphenyl	mg/kg		5	N.D.
Heptabromobiphenyl	mg/kg		5	N.D.
Octabromobiphenyl	mg/kg		5	N.D.
Nonabromobiphenyl	mg/kg		5	N.D.
Decabromobiphenyl	mg/kg		5	N.D.

Polybrominated diphenyl ethers (PBDEs)

Item(s)	Unit	Test Method	MDL	Result
Monobromodiphenyl ether	mg/kg	IEC 62321-6 : 2015, GC-MS.	5	N.D.
Dibromodiphenyl ether	mg/kg		5	N.D.
Tribromodiphenyl ether	mg/kg		5	N.D.
Tetrabromodiphenyl ether	mg/kg		5	N.D.
Pentabromodiphenyl ether	mg/kg		5	N.D.
Hexabromodiphenyl ether	mg/kg		5	N.D.
Heptabromodiphenyl ether	mg/kg		5	N.D.
Octabromodiphenyl ether	mg/kg		5	N.D.
Nonabromodiphenyl ether	mg/kg		5	N.D.
Decabromodiphenyl ether	mg/kg		5	N.D.

■ **Result**

Heavy metal

Item(s)	Unit	Test Method	MDL	Result
Cadmium (Cd)	mg/kg	IEC 62321-5 : 2013, ICP-OES.	1	N.D.
Lead (Pb)	mg/kg		5	N.D.
Mercury (Hg)	mg/kg	IEC 62321-4 : 2017, ICP-OES.	5	N.D.
Hexavalent Chromium (Cr ⁶⁺)	mg/kg	IEC 62321-7-2 : 2017, UV-VIS.	1	N.D.

Phthalate

Item(s)	CAS No.	Unit	Test Method	MDL	Result
Diisobutyl phthalate (DIBP)	84-69-5	mg/kg	IEC 62321-8 : 2017, GC-MS.	50	N.D.
Di-n-butyl phthalate (DBP)	84-74-2	mg/kg		50	N.D.
Benzyl butyl phthalate (BBP)	85-68-7	mg/kg		50	N.D.
Di(2-ethyl hexyl) phthalate (DEHP)	117-81-7	mg/kg		50	N.D.

* Note :

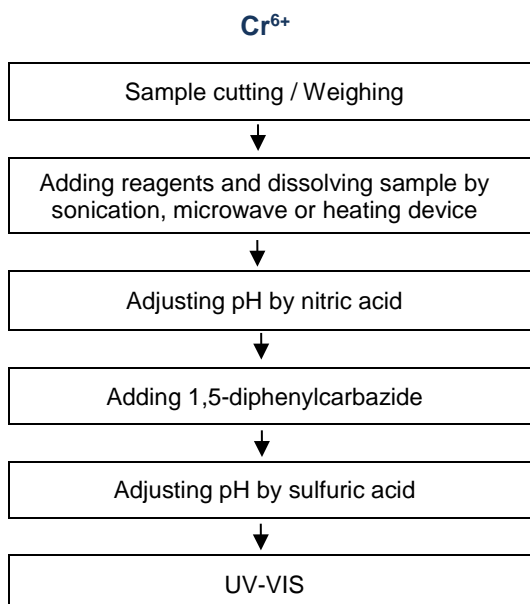
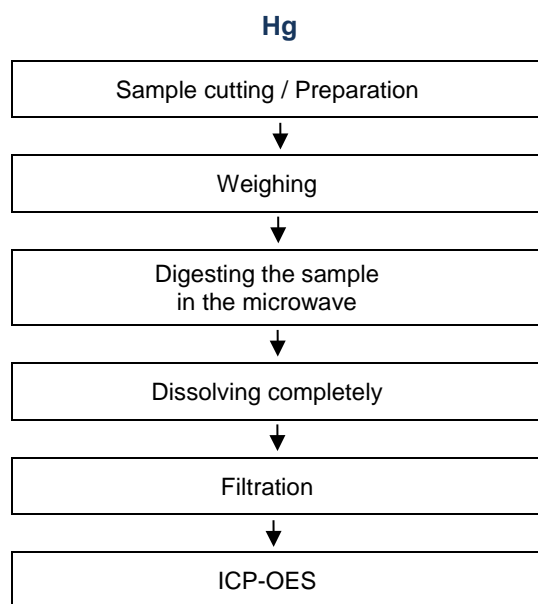
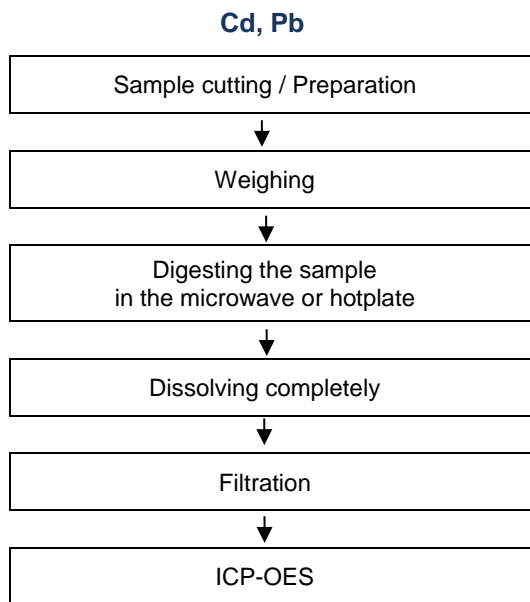
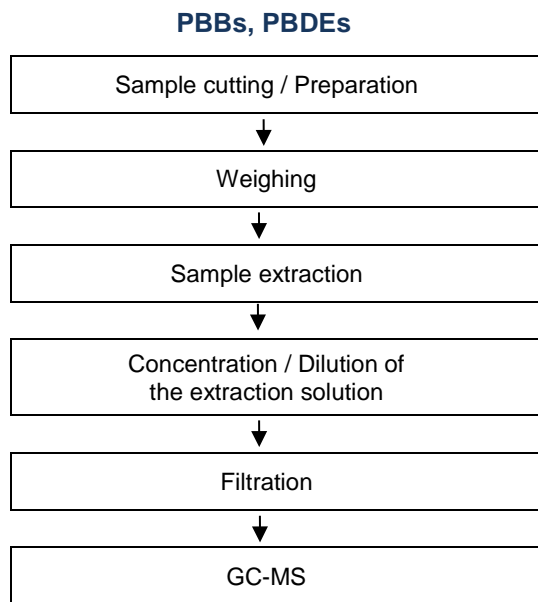
MDL = Method detection limit
 N.D. = Not detected
 Negative = Undetectable / Positive = Detectable
 mg/kg = ppm (part per million)
 If the star mark (*) is shown on the item, it isn't the scope recognized by TÜV SÜD.
 Tested by Na Rae Kim and(or) Hyae Yeon Yoo

■ Photograph

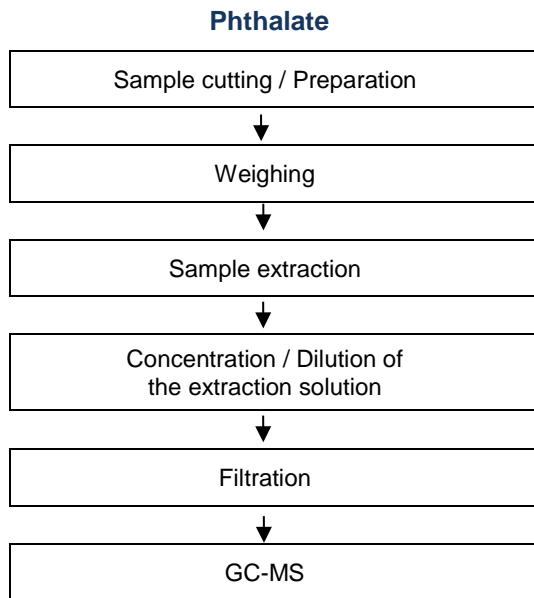


The tested sample is marked by an arrow if it's shown on the photograph.

■ Flow chart



■ Flow chart



- E N D -

Applicant : Santon International bv
Hekendorpstraat 69 ● 3079 DX Rotterdam The Netherlands

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

Sample Name : Cell rubber seal

Sample ID/Description : -

Date of receipt : Mar 05, 2019

Test Period : Mar 05 ~ 11, 2019

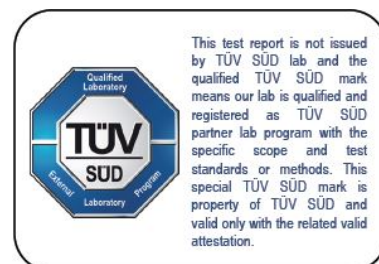
Date of issue : Mar 11, 2019

For further details, please refer to the following pages.

Approved by :



Technical Manager: Jeong Ryeol Baik



■ **Result**

Polybrominated biphenyls (PBBs)

Item(s)	Unit	Test Method	MDL	Result
Monobromobiphenyl	mg/kg	IEC 62321-6 : 2015, GC-MS.	5	N.D.
Dibromobiphenyl	mg/kg		5	N.D.
Tribromobiphenyl	mg/kg		5	N.D.
Tetrabromobiphenyl	mg/kg		5	N.D.
Pentabromobiphenyl	mg/kg		5	N.D.
Hexabromobiphenyl	mg/kg		5	N.D.
Heptabromobiphenyl	mg/kg		5	N.D.
Octabromobiphenyl	mg/kg		5	N.D.
Nonabromobiphenyl	mg/kg		5	N.D.
Decabromobiphenyl	mg/kg		5	N.D.

Polybrominated diphenyl ethers (PBDEs)

Item(s)	Unit	Test Method	MDL	Result
Monobromodiphenyl ether	mg/kg	IEC 62321-6 : 2015, GC-MS.	5	N.D.
Dibromodiphenyl ether	mg/kg		5	N.D.
Tribromodiphenyl ether	mg/kg		5	N.D.
Tetrabromodiphenyl ether	mg/kg		5	N.D.
Pentabromodiphenyl ether	mg/kg		5	N.D.
Hexabromodiphenyl ether	mg/kg		5	N.D.
Heptabromodiphenyl ether	mg/kg		5	N.D.
Octabromodiphenyl ether	mg/kg		5	N.D.
Nonabromodiphenyl ether	mg/kg		5	N.D.
Decabromodiphenyl ether	mg/kg		5	N.D.

■ **Result**

Heavy metal

Item(s)	Unit	Test Method	MDL	Result
Cadmium (Cd)	mg/kg	IEC 62321-5 : 2013, ICP-OES.	1	N.D.
Lead (Pb)	mg/kg		5	N.D.
Mercury (Hg)	mg/kg	IEC 62321-4 : 2017, ICP-OES.	5	N.D.
Hexavalent Chromium (Cr ⁶⁺)	mg/kg	IEC 62321-7-2 : 2017, UV-VIS.	1	N.D.

Phthalate

Item(s)	CAS No.	Unit	Test Method	MDL	Result
Diisobutyl phthalate (DIBP)	84-69-5	mg/kg	IEC 62321-8 : 2017, GC-MS.	50	N.D.
Di-n-butyl phthalate (DBP)	84-74-2	mg/kg		50	N.D.
Benzyl butyl phthalate (BBP)	85-68-7	mg/kg		50	N.D.
Di(2-ethyl hexyl) phthalate (DEHP)	117-81-7	mg/kg		50	N.D.

* Note :

MDL = Method detection limit

N.D. = Not detected

Negative = Undetectable / Positive = Detectable

mg/kg = ppm (part per million)

If the star mark (*) is shown on the item, it isn't the scope recognized by TÜV SÜD.

Tested by Na Rae Kim and(or) Hyae Yeon Yoo

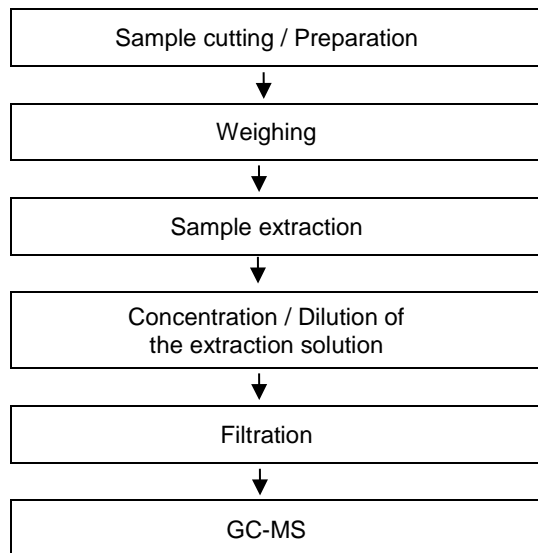
■ Photograph



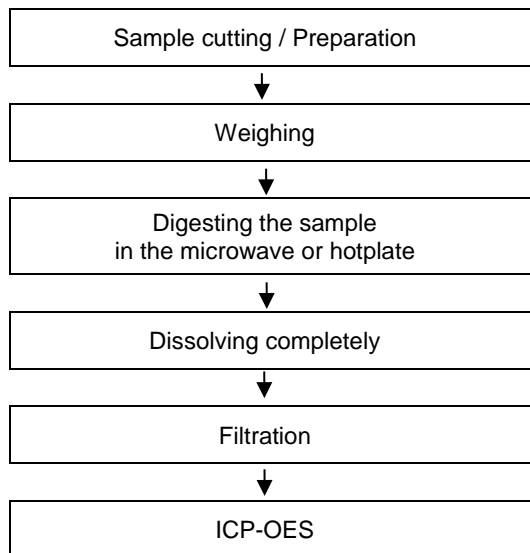
The tested sample is marked by an arrow if it's shown on the photograph.

■ Flow chart

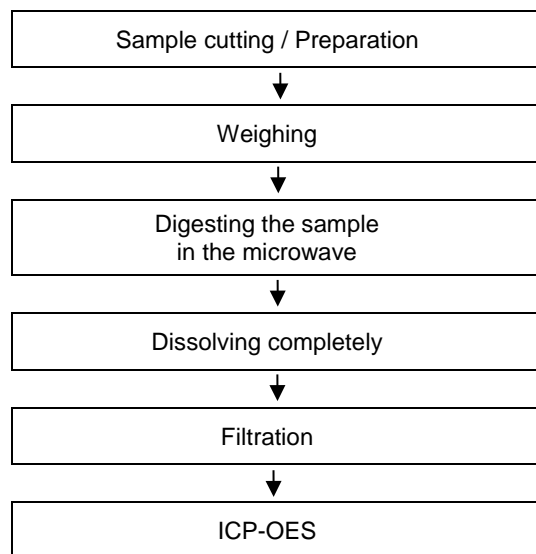
PBBs, PBDEs



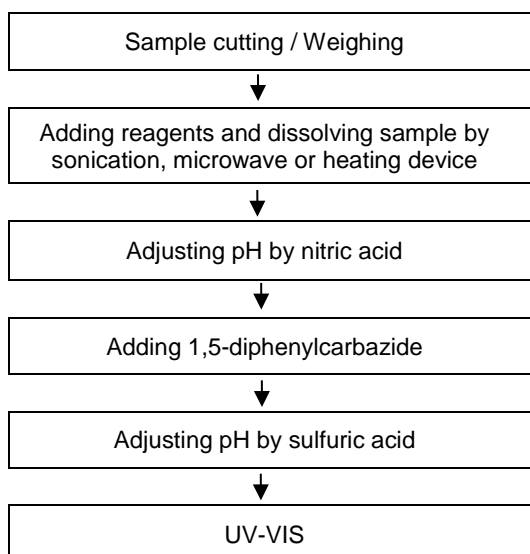
Cd, Pb



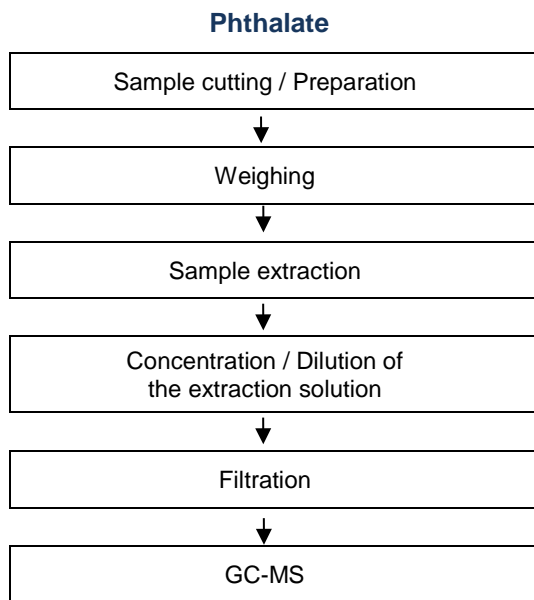
Hg



Cr⁶⁺



■ Flow chart



- E N D -

Applicant : Santon International bv
Hekendorpstraat 69 ● 3079 DX Rotterdam The Netherlands

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

Sample Name : Nut

Sample ID/Description : -

Date of receipt : Mar 05, 2019

Test Period : Mar 05 ~ 11, 2019

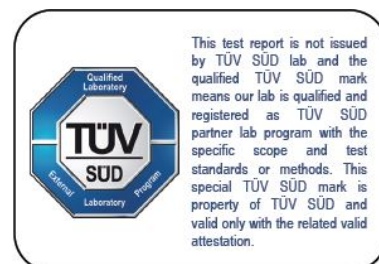
Date of issue : Mar 11, 2019

For further details, please refer to the following pages.

Approved by :



Technical Manager: Jeong Ryeol Baik



■ **Result**

Polybrominated biphenyls (PBBs)

Item(s)	Unit	Test Method	MDL	Result
Monobromobiphenyl	mg/kg	IEC 62321-6 : 2015, GC-MS.	5	N.D.
Dibromobiphenyl	mg/kg		5	N.D.
Tribromobiphenyl	mg/kg		5	N.D.
Tetrabromobiphenyl	mg/kg		5	N.D.
Pentabromobiphenyl	mg/kg		5	N.D.
Hexabromobiphenyl	mg/kg		5	N.D.
Heptabromobiphenyl	mg/kg		5	N.D.
Octabromobiphenyl	mg/kg		5	N.D.
Nonabromobiphenyl	mg/kg		5	N.D.
Decabromobiphenyl	mg/kg		5	N.D.

Polybrominated diphenyl ethers (PBDEs)

Item(s)	Unit	Test Method	MDL	Result
Monobromodiphenyl ether	mg/kg	IEC 62321-6 : 2015, GC-MS.	5	N.D.
Dibromodiphenyl ether	mg/kg		5	N.D.
Tribromodiphenyl ether	mg/kg		5	N.D.
Tetrabromodiphenyl ether	mg/kg		5	N.D.
Pentabromodiphenyl ether	mg/kg		5	N.D.
Hexabromodiphenyl ether	mg/kg		5	N.D.
Heptabromodiphenyl ether	mg/kg		5	N.D.
Octabromodiphenyl ether	mg/kg		5	N.D.
Nonabromodiphenyl ether	mg/kg		5	N.D.
Decabromodiphenyl ether	mg/kg		5	N.D.

■ **Result**

Heavy metal

Item(s)	Unit	Test Method	MDL	Result
Cadmium (Cd)	mg/kg	IEC 62321-5 : 2013, ICP-OES.	1	N.D.
Lead (Pb)	mg/kg		5	N.D.
Mercury (Hg)	mg/kg	IEC 62321-4 : 2017, ICP-OES.	5	N.D.
Hexavalent Chromium (Cr ⁶⁺)	mg/kg	IEC 62321-7-2 : 2017, UV-VIS.	1	N.D.

Phthalate

Item(s)	CAS No.	Unit	Test Method	MDL	Result
Diisobutyl phthalate (DIBP)	84-69-5	mg/kg	IEC 62321-8 : 2017, GC-MS.	50	N.D.
Di-n-butyl phthalate (DBP)	84-74-2	mg/kg		50	N.D.
Benzyl butyl phthalate (BBP)	85-68-7	mg/kg		50	N.D.
Di(2-ethyl hexyl) phthalate (DEHP)	117-81-7	mg/kg		50	N.D.

* Note :

MDL = Method detection limit

N.D. = Not detected

Negative = Undetectable / Positive = Detectable

mg/kg = ppm (part per million)

If the star mark (*) is shown on the item, it isn't the scope recognized by TÜV SÜD.

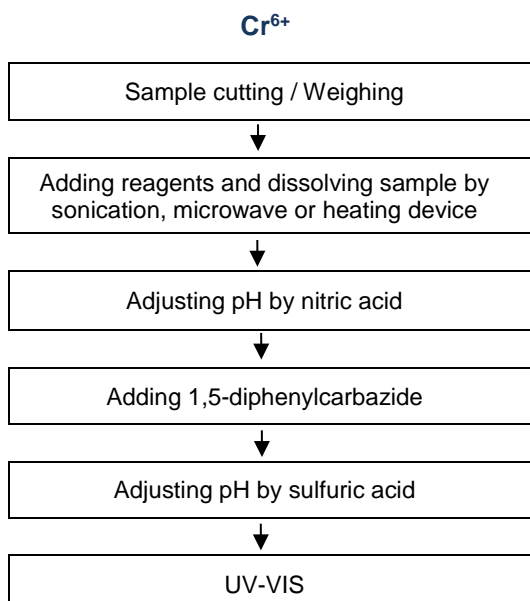
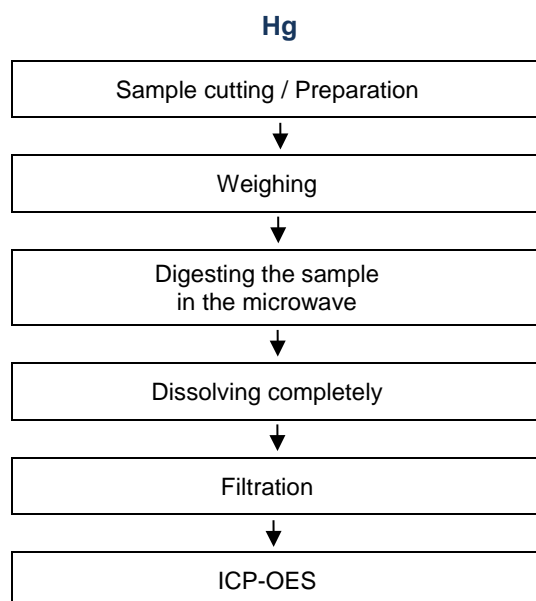
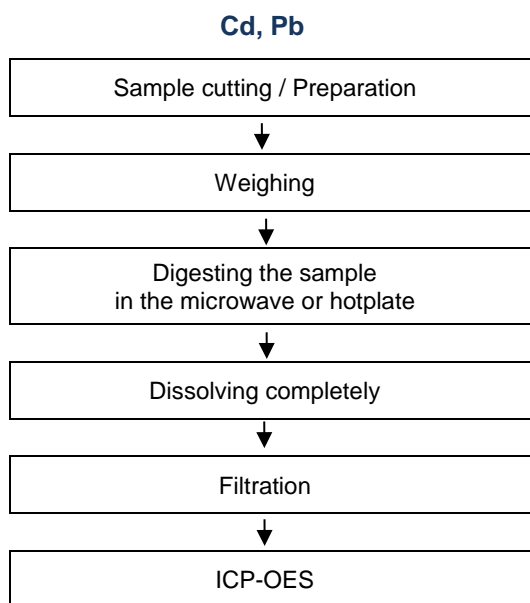
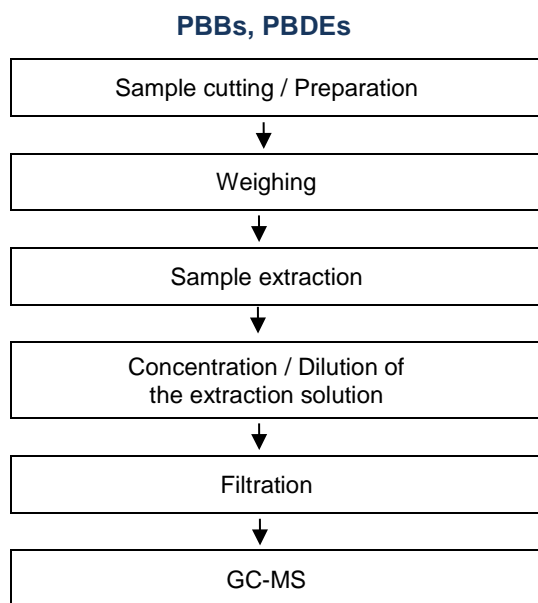
Tested by Na Rae Kim and(or) Hyae Yeon Yoo

■ Photograph

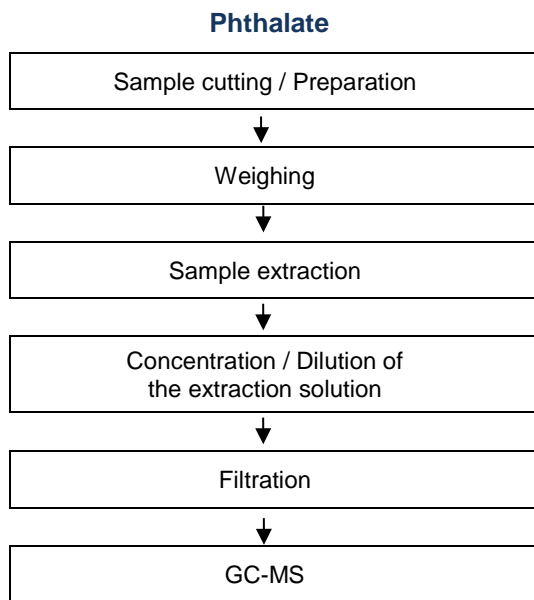


The tested sample is marked by an arrow if it's shown on the photograph.

■ Flow chart



■ Flow chart



- E N D -

Applicant : Santon International bv
Hekendorpstraat 69 ● 3079 DX Rotterdam The Netherlands

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

Sample Name : Standard plate

Sample ID/Description : -

Date of receipt : Mar 05, 2019

Test Period : Mar 05 ~ 11, 2019

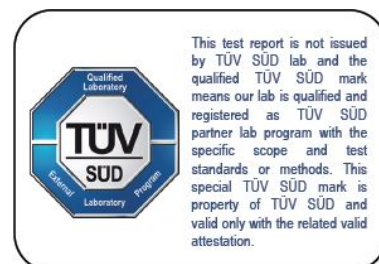
Date of issue : Mar 11, 2019

For further details, please refer to the following pages.

Approved by :



Technical Manager: Jeong Ryeol Baik



■ **Result**

Polybrominated biphenyls (PBBs)

Item(s)	Unit	Test Method	MDL	Result
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Tetrabromobiphenyl	mg/kg		5	N.D.
Pentabromobiphenyl	mg/kg		5	N.D.
Hexabromobiphenyl	mg/kg		5	N.D.
Heptabromobiphenyl	mg/kg		5	N.D.
Octabromobiphenyl	mg/kg		5	N.D.
Nonabromobiphenyl	mg/kg		5	N.D.
Decabromobiphenyl	mg/kg		5	N.D.

Polybrominated diphenyl ethers (PBDEs)

Item(s)	Unit	Test Method	MDL	Result
Monobromodiphenyl ether	mg/kg	IEC 62321-6 : 2015, GC-MS.	5	N.D.
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Tribromodiphenyl ether	mg/kg		5	N.D.
Tetrabromodiphenyl ether	mg/kg		5	N.D.
Pentabromodiphenyl ether	mg/kg		5	N.D.
Hexabromodiphenyl ether	mg/kg		5	N.D.
Heptabromodiphenyl ether	mg/kg		5	N.D.
Octabromodiphenyl ether	mg/kg		5	N.D.
Nonabromodiphenyl ether	mg/kg		5	N.D.
Decabromodiphenyl ether	mg/kg		5	N.D.

■ **Result**

Heavy metal

Item(s)	Unit	Test Method	MDL	Result
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Mercury (Hg)	mg/kg	IEC 62321-4 : 2017, ICP-OES.	5	N.D.
Hexavalent Chromium (Cr ⁶⁺)	mg/kg	IEC 62321-7-2 : 2017, UV-VIS.	1	N.D.

Phthalate

Item(s)	CAS No.	Unit	Test Method	MDL	Result
Diisobutyl phthalate (DIBP)	84-69-5	mg/kg	IEC 62321-8 : 2017, GC-MS.	50	N.D.
Di-n-butyl phthalate (DBP)	84-74-2	mg/kg		50	N.D.
Benzyl butyl phthalate (BBP)	85-68-7	mg/kg		50	N.D.
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* Note :

MDL = Method detection limit

N.D. = Not detected

Negative = Undetectable / Positive = Detectable

mg/kg = ppm (part per million)

If the star mark (*) is shown on the item, it isn't the scope recognized by TÜV SÜD.

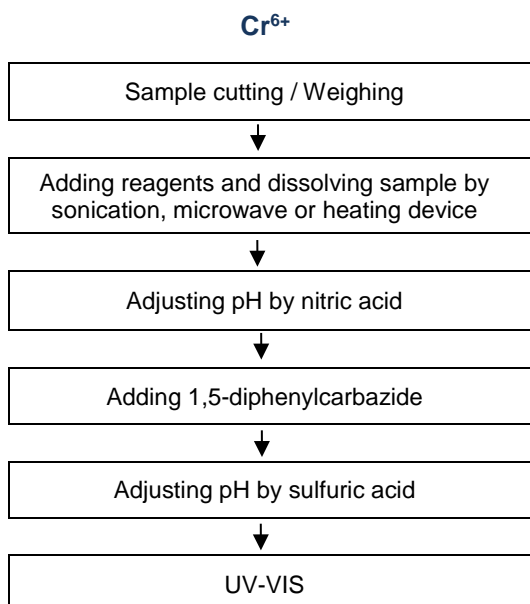
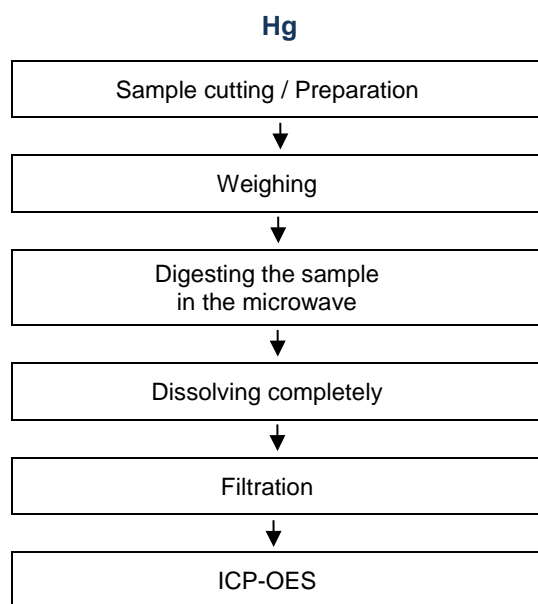
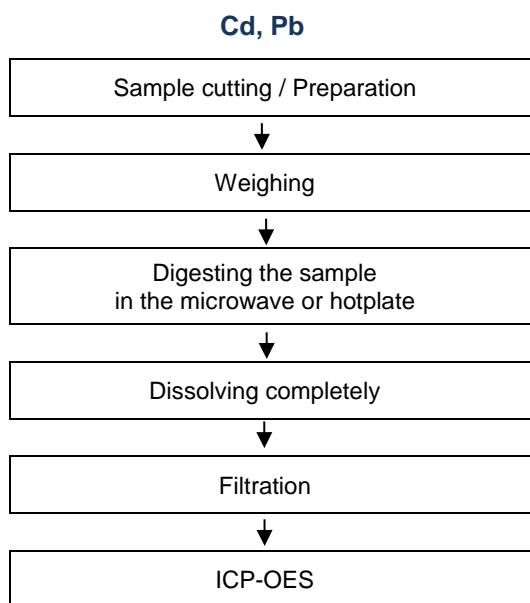
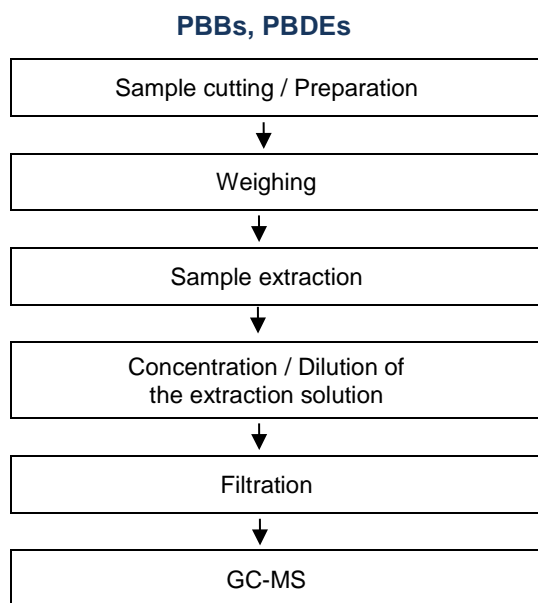
Tested by Na Rae Kim and(or) Hyae Yeon Yoo

■ Photograph

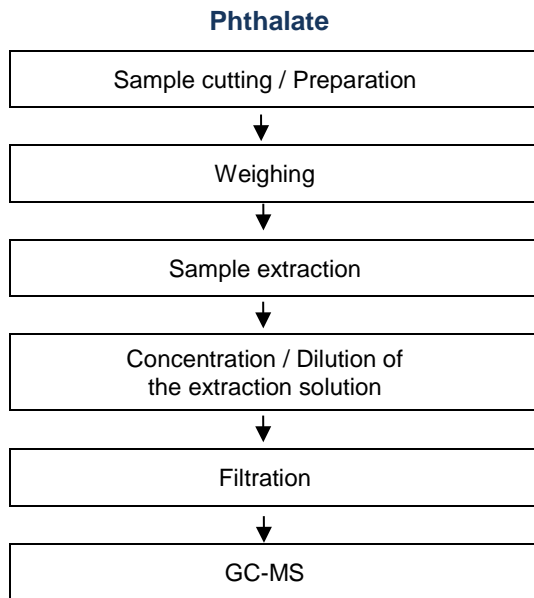


The tested sample is marked by an arrow if it's shown on the photograph.

■ Flow chart



■ Flow chart



- E N D -