TEST REPORT

APPLICANT : Seoul Chemical Research Laboratory CO., LTD.
ADDRESS : #1MA 605-5, Sihwa Comp. 63 Gongdan 2-daero
Siheung-si, Gyeonggi-do, Korea

REPORT NO. RT22R-S3887-004-E DATE: Jul. 27, 2022

SAMPLE DESCRIPTION	: The following submitted sample(s) said to be:-
NAME/TYPE OF PRODUCT	: SPI-707 BLACK TN WITH SH-2 TN
SAMPLE ID NO.	: RT22R-S3887-004
ITEM NO.	: SPI-707 MATT BLACK TN WITH SH-2 TN, SPI-707 BLACK TN21 WITH SH-2 TN21
MANUFACTURER/VENDOR	: Seoul Chemical Research Laboratory CO., LTD.
SAMPLE RECEIVED	: Jul. 14, 2022
TESTING DATE	: Jul. 14, 2022 ~ Jul. 27, 2022
TEST METHOD(S)	: Please see the following page(s).
TEST RESULT(S)	: Please see the following page(s).

* Note 1 : The test results presented in this report refer only to the object tested.
* Note 2 : This report shall not be reproduced except in full without the written approval of the testing laboratory.
* Note 3 : The item no. is assigned by client and indicated according to their requirement and guarantee letter.

Approved by,

Jade Jang / Lab. Technical Manager

Authorized by,

Bo Park / Lab. General Manager

Authenticity check

Intertek Testing Services Korea Ltd.
Seoul Office: Tel : 02-6090-9500 Fax : 02-3409-0025 Web Site : intertek.co.kr
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SAMPLE ID NO. : RT22R-S3887-004
SAMPLE DESCRIPTION : SPI-707 BLACK TN WITH SH-2 TN

TEST ITEM	UNIT	TEST METHOD	MDL	RESULT
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5 Edition 1.0 : 2013, by acid digestion and determined by ICP-OES	0.5	N.D.
Lead (Pb)	mg/kg		5	N.D.
Mercury (Hg)	mg/kg	With reference to IEC 62321-4 : 2013/AMD1 : 2017, by acid digestion and determined by ICP-OES	2	N.D.
Hexavalent Chromium (Cr^{6+})	mg/kg	With reference to IEC 62321-7-2 Edition 1.0 : 2017, by alkaline/toluene digestion and determined by UV-VIS Spectrophotometer	8	N.D.
Polybrominated Biphenyl (PBBs)				
Monobromobiphenyl	mg/kg	With reference to IEC 62321-6 Edition 1.0 : 2015, by solvent extraction and determined by 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 Ether (PBDEs)				
Monobromodiphenyl ether	mg/kg	With reference to IEC 62321-6 Edition 1.0 : 2015, by solvent extraction and determined by 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.

Tested by : Jooyeon Lee, Chano Kim, Hayan Park

Notes : mg/kg = ppm = parts per million
< = Less than
N.D. = Not detected (<MDL)
MDL = Method detection limit

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TEST REPORT

REPORT NO. RT22R-S3887-004-E DATE: Jul. 27, 2022

SAMPLE ID NO. : RT22R-S3887-004

SAMPLE DESCRIPTION : SPI-707 BLACK TN WITH SH-2 TN

TEST ITEM	UNIT	TEST METHOD	MDL	RESULT
Hexabromocyclododecane (HBCDD)	mg/kg	With reference to IEC 62321-9(111/409/CD), by solvent extraction and determined by LC/MS and GC/MS	10	N.D.

Tested by : Hayan Park

Notes : mg/kg = ppm = parts per million
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SAMPLE DESCRIPTION : SPI-707 BLACK TN WITH SH-2 TN

TEST ITEM	CAS NO.	UNIT	TEST METHOD	MDL	RESULT
Dibutyl phthalate (DBP)	84-74-2	mg/kg	With reference to IEC 62321-8 Edition 1.0 : 2017, by solvent extraction and determined by GC/MS	50	N.D.
Di(2-ethylhexyl) phthalate (DEHP)	117-81-7	mg/kg		50	N.D.
Diisobutyl phthalate (DIBP)	84-69-5	mg/kg		50	N.D.
Benzyl butyl phthalate (BBP)	85-68-7	mg/kg		50	N.D.

Tested by : Hayan Park

Notes : mg/kg = ppm = parts per million
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* View of sample as received;-



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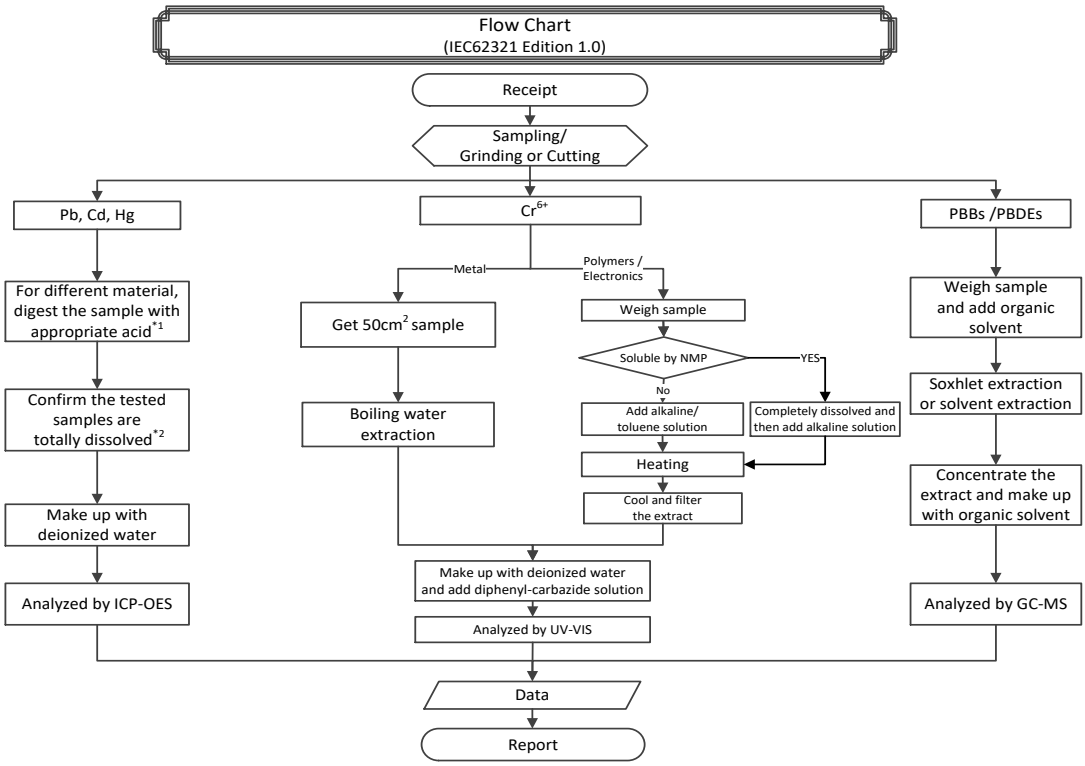
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SAMPLE ID NO. : RT22R-S3887-004

SAMPLE DESCRIPTION : SPI-707 BLACK TN WITH SH-2 TN



Remarks :

*1 : List of appropriate acid :

Material	Acid added for digestion
Polymers	HNO_3, HCl, HF, H_2O_2, $H3BO_3$
Metals	HNO_3, HCl, HF
Electronics	HNO_3, HCl, H_2O_2, HBF_4

*2 : The samples were dissolved totally by pre-conditioning method according to above flow chart.

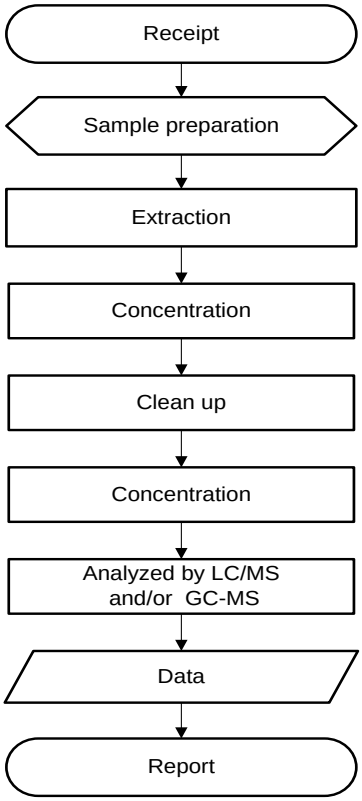
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Flow Chart (HBCDD)



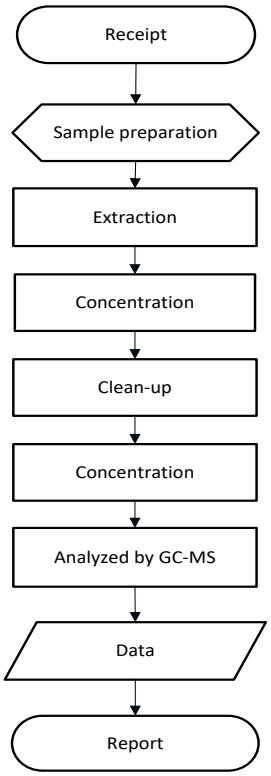
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Flow Chart (Phthalates)



***** End of Report *****

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