

APPLICANT : PILKOR Electronics Division. (of COWELL Fashion Co., Ltd.)

ADDRESS: 270, Sinwon-ro(Woncheon-dong), Yeongtong-gu,

Suwon-si, Gyeonggi-do, Korea

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REPORT NO. RT19R-S4045-E DATE: Sep. 20, 2019

SAMPLE DESCRIPTION : The following submitted sample(s) said to be:-

NAME/TYPE OF PRODUCT : Film capacitor

SAMPLE ID NO. : RT19R-S4045

ITEM NO. : PCMT (BOX TYPE)

MANUFACTURER/VENDOR : PILKOR Electronics Division. (of COWELL Fashion Co., Ltd.)

NAME OF BUYER : Sony, Samsung, LG

SAMPLE RECEIVED : Sep. 03, 2019

TESTING DATE : Sep. 03, 2019 ~ Sep. 20, 2019

TEST METHOD(S) : Please see the following page(s).
TEST RESULT(S) : Please see the following page(s).

Approved by,

Authorized by,

Authenticity check

Jade Jang / Lab. Technical Manager

Bo Park / Lab. General Manager

Intertek Testing Services Korea Ltd.



<sup>\*</sup> Note 1 : The test results presented in this report refer only to the object tested.

<sup>\*</sup> Note 2: This report shall not be reproduced except in full without the written approval of the testing laboratory.

<sup>\*</sup> Note 3 : This report is not related to the scope of Korea laboratory accreditation scheme.

<sup>\*</sup> Note 4: The item no. is assigned by client and indicated according to their requirement and guarantee letter.



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REPORT NO. RT19R-S4045-E DATE: Sep. 20, 2019

SAMPLE ID NO. : RT19R-S4045 SAMPLE DESCRIPTION : Film capacitor

TEST ITEM	UNIT	TEST METHOD	MDL	RESULT		
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5 Edition 1.0 : 2013,	0.5	N.D.		
Lead (Pb)	mg/kg	by acid digestion and determined by ICP-OES	5	N.D.		
Mercury (Hg)	mg/kg	With reference to IEC 62321-4 Edition 1.0 : 2013, by acid digestion and determined by ICP-OES	2	N.D.		
Hexavalent Chromium (Cr <sup>6+</sup> )	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)	1			_		
Monobromobiphenyl	mg/kg		5	N.D.		
Dibromobiphenyl	mg/kg		5	N.D.		
Tribromobiphenyl	mg/kg		5	N.D.		
Tetrabromobiphenyl	mg/kg	With reference to	5	N.D.		
Pentabromobiphenyl	mg/kg	IEC 62321-6 Edition 1.0 : 2015,	5	N.D.		
Hexabromobiphenyl	mg/kg	by solvent extraction and	5	N.D.		
Heptabromobiphenyl	mg/kg	determined by GC/MS	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		5	N.D.		
Dibromodiphenyl ether	mg/kg		5	N.D.		
Tribromodiphenyl ether	mg/kg		5	N.D.		
Tetrabromodiphenyl ether	mg/kg	With reference to	5	N.D.		
Pentabromodiphenyl ether	mg/kg	IEC 62321-6 Edition 1.0 : 2015,	5	N.D.		
Hexabromodiphenyl ether	mg/kg	by solvent extraction and	5	N.D.		
Heptabromodiphenyl ether	mg/kg	determined by GC/MS	5	N.D.		
Octabromodiphenyl ether	mg/kg	5 1				
Nonabromodiphenyl ether	mg/kg	]	N.D.			
Decabromodiphenyl ether	mg/kg		5	N.D.		

Tested by : Jooyeon Lee, Seulgi Park, Miseon Lee

Notes: mg/kg = ppm = parts per million

< = Less than

N.D. = Not detected ( <MDL ) MDL = Method detection limit

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REPORT NO. RT19R-S4045-E DATE: Sep. 20, 2019

SAMPLE ID NO. : RT19R-S4045 SAMPLE DESCRIPTION : Film capacitor

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

Tested by : Miseon Lee

Notes: mg/kg = ppm = parts per million

< = Less than

N.D. = Not detected ( <MDL )
MDL = Method detection limit

<sup>\*</sup> View of sample as received;-



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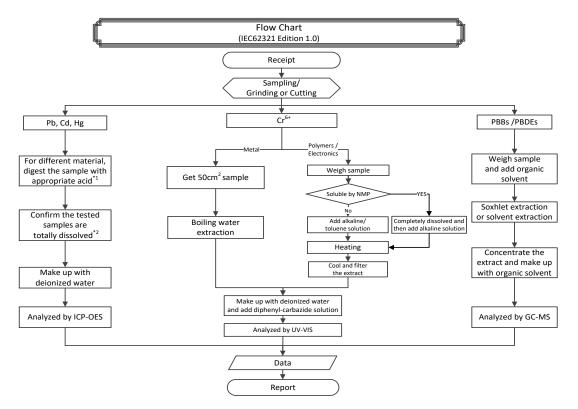




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REPORT NO. RT19R-S4045-E DATE: Sep. 20, 2019

SAMPLE ID NO. : RT19R-S4045 SAMPLE DESCRIPTION: Film capacitor



Remarks : \*1 : List of appropriate acid :

Material	Acid added for digestion
Polymers	HNO₃, HCl, HF, H <sub>2</sub> O <sub>2</sub> , H3BO₃
Metals	HNO₃, HCl, HF
Electronics	HNO <sub>3</sub> , HCl, H <sub>2</sub> O <sub>2</sub> , HBF <sub>4</sub>

<sup>\*2:</sup> The samples were dissolved totally by pre-conditioning method according to above flow chart.

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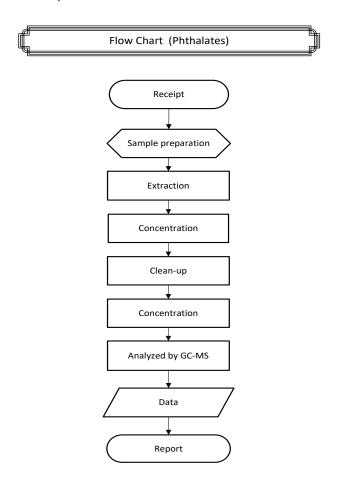


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DATE: Sep. 20, 2019

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

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