Test Report

COA No.: TCOA20-0077-01

188, Moonji-ro, Yuseong-gu, Daejeon,
34122, Korea
Tel: +82-42-866-4764

3. 13, 2020

Client Name	JIN A KWAK
Client Company	ABS Division, LG Chem, Ltd.
Application	Requested by Client
Sample Name/Description	HF380
Sample Received	3. 3, 2020
Testing Date	3. 5, 2020 ~ 3. 13, 2020
Testing Environment	Temperature : (25 ± 8) ℃, Humidity : (27 ± 10) % R.H.
Reporting Date	3. 13, 2020
Testing method	Please see the following page(s).
Results	Please see the following page(s).

1. The results shown in this report refer only to the sample with which the client provided. The sample name is referred as client assigned.
2. This report cannot be duplicated or utilized without prior permission.
3. This report can be reissued after approval by technical manager and director of analytical center.

Tested by

MIKYUNG KIM / Analyst

Authorized by

SANGWOO KIM / Technical Manager

This test report is not issued by TÜV SÜD lab and the qualified TÜV SÜD mark means our lab is qualified and registered as TÜV SÜD partner lab program with the specific scope and test standards or methods. This special TÜV SÜD mark is property of TÜV SÜD and valid only with the related valid attestation.

LG Chem

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Result(s)

Sample Description: HF380

Heavy Metals

Unit : mg/kg

Test Items	Results	MDL	Test Method
Pb	ND	10	ICP/OES,IEC 62321-5:2013
Cd	ND	10	
Cr	ND	10	
Hg	ND	4	TD(G)-AAS, IEC 62321-4:2013

* Cr content includes entire Cr species including Cr^{6+}

Flame Retardants-PBBs/PBDEs

Unit : mg/kg

Test Items	Results	MDL	Test Method
Monobromobiphenyl	ND	20	GC/MS, IEC62321-6:2015
Dibromobiphenyl	ND	20	
Tribromobiphenyl	ND	20	
Tetrabromobiphenyl	ND	20	
Pentabromobiphenyl	ND	20	
Hexabromobiphenyl	ND	20	
Heptabromobiphenyl	ND	20	
Octabromobiphenyl	ND	20	
Nonabromobiphenyl	ND	20	
Decabromobiphenyl	ND	20	
Monobromodiphenyl ether	ND	20	
Dibromodiphenyl ether	ND	20	
Tribromodiphenyl ether	ND	20	
Tetrabromodiphenyl ether	ND	20	
Pentabromodiphenyl ether	ND	20	
Hexabromodiphenyl ether	ND	20	
Heptabromodiphenyl ether	ND	20	
Octabromodiphenyl ether	ND	20	
Nonabromodiphenyl ether	ND	20	
Decabromodiphenyl ether	ND	20	

* ND :Not Detected
* MDL :Method Detection Limit

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Phthalates

Unit : mg/kg

Test Items	Results	MDL	Test Method
Dimethyl phthalate	ND	50	GC/MS, IEC 62321-8:2017 (In-House Test Method)
Diethyl phthalate	ND	50	
Di-n-butyl phthalate	ND	50	GC/MS, IEC 62321-8:2017
Di-iso-butyl phthalate	ND	50	
Butyl benzyl phthalate	ND	50	
Di-(2-ethylhexyl)- phthalate	ND	50	
Di-n-octyl phthalate	ND	50	
Di-iso-nonyl phthalate	ND	50	
Di-iso-decyl phthalate	ND	50	

* ND: Not Detected
* MDL: Method Detection Limit

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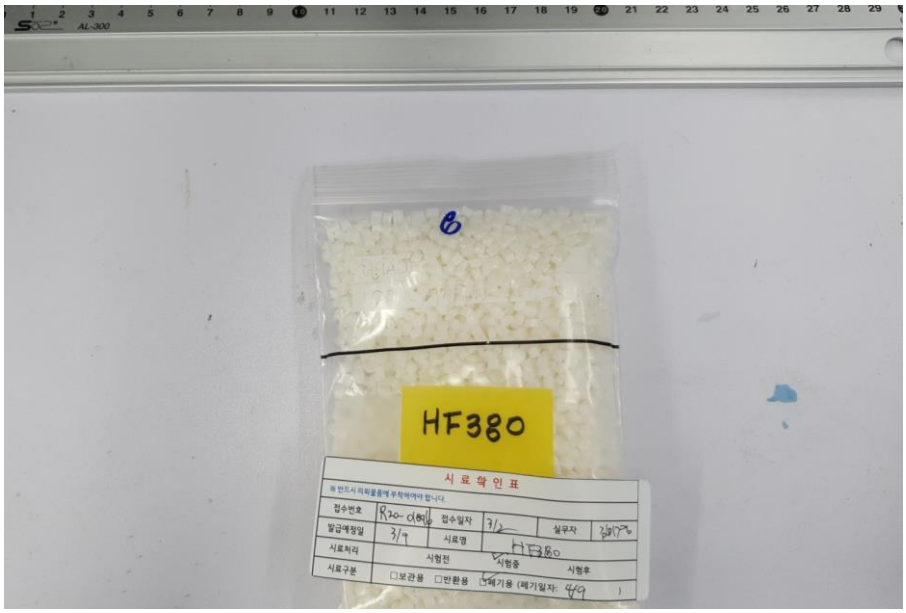
Picture of Sample as Received:



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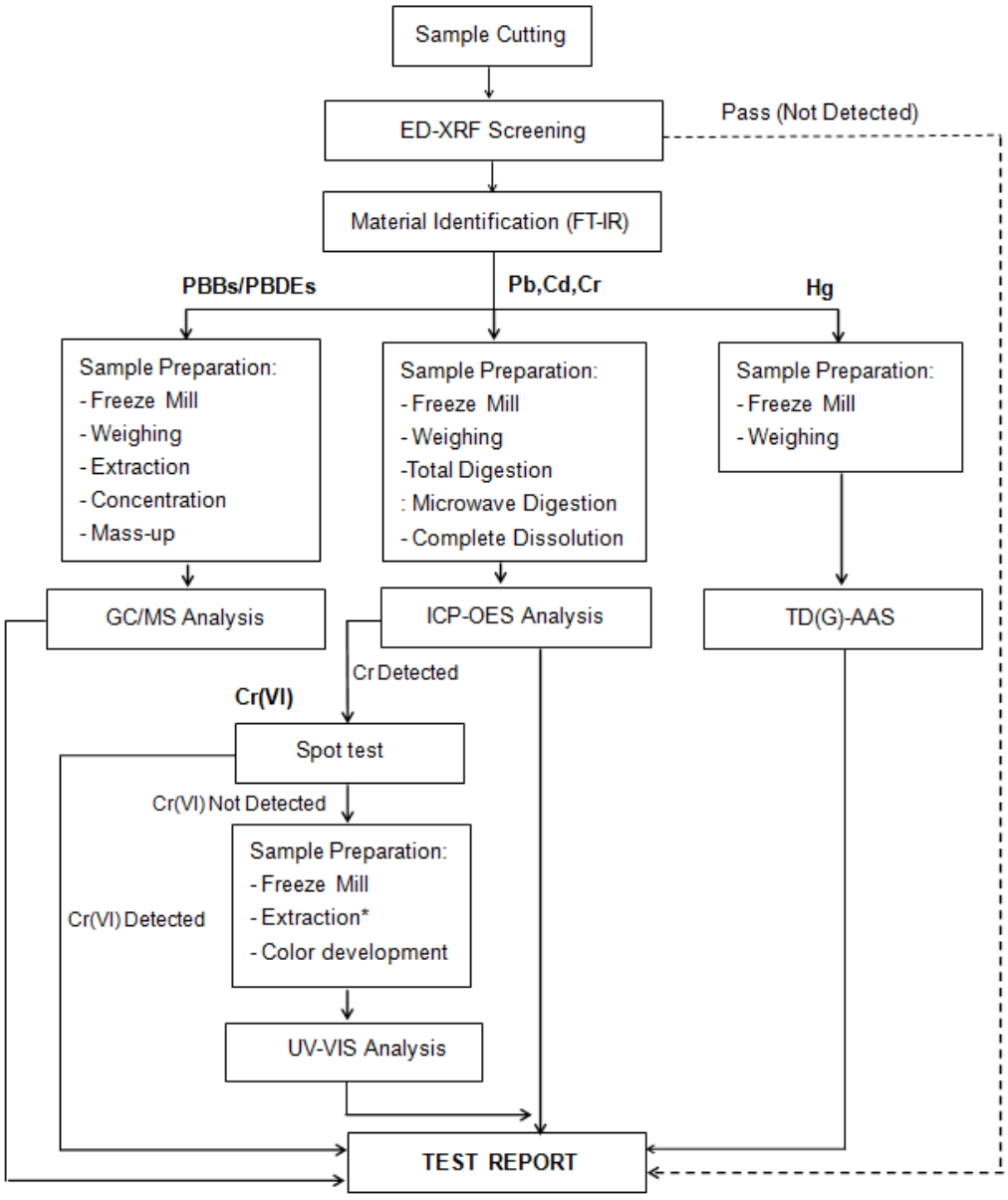
The Test Procedures (RoHS)



* (1) For non-metallic material, add alkaline digestion reagent

(2) For metallic material, add pure water and heat to boiling

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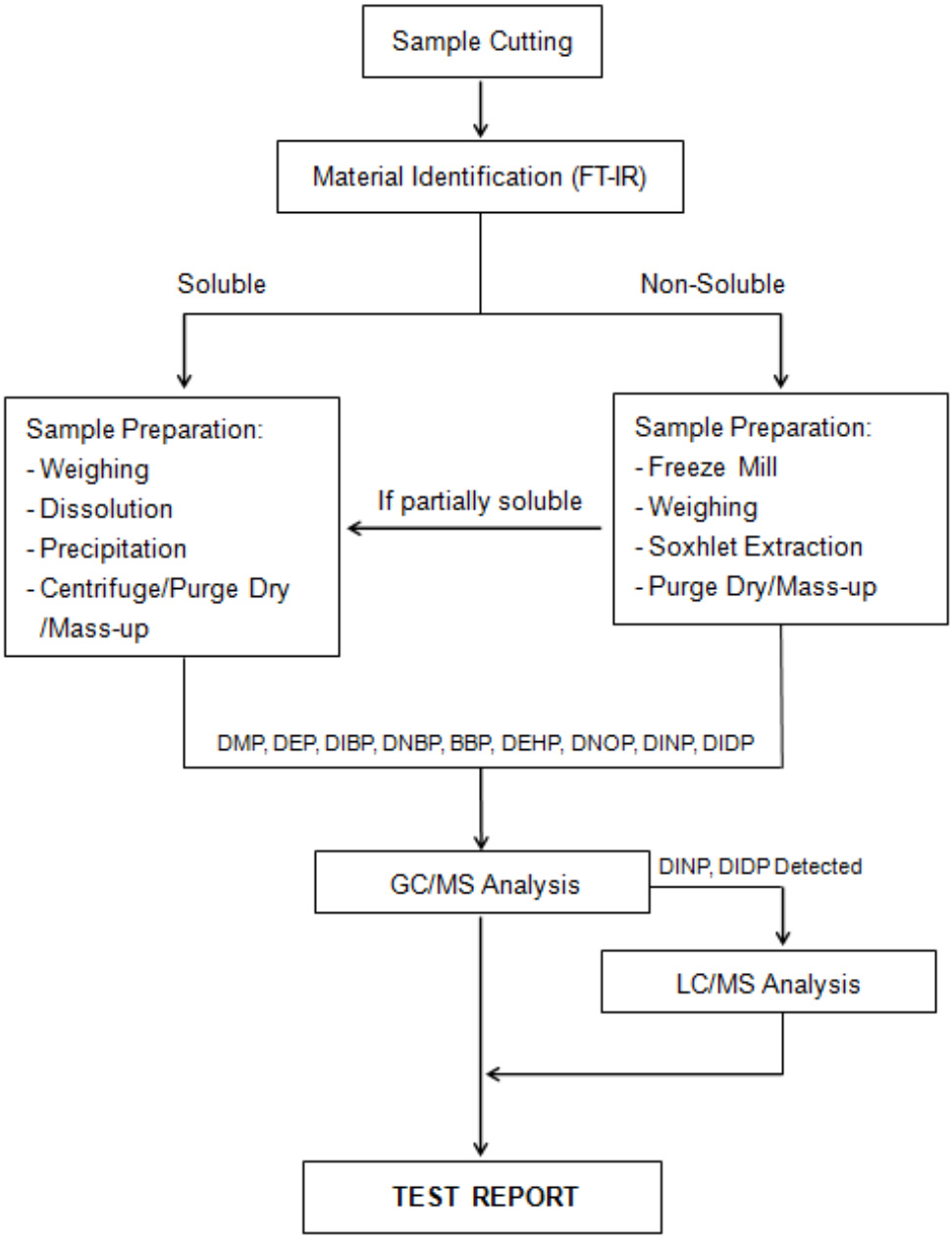
The Test Procedures (Phthalates)



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