TEST REPORT

KOTITI No. **8222-1401-100961**

Applicant Avery Dennison Korea

Date In 2022. 02. 22. **Date Out** 2022. 03. 03.

Sample Description	UVR180
Sample Quantity	One (1) Sample(s)
Buyer	N/S
Item Number	UVR180
Material	adhesive
Testing Period	2022. 02. 22. ~ 2022. 03. 03.
Test Result	**For further details, please refer to the following page(s).**

*** N/S : Not Submitted, N.A. : Not Applicable, N.D. : Not Detected [< RL(Report Limit)]**

*** Negative : Not Detected, Positive : Detected**

Affirmation	Prepared by	Technical Manager
	Name : Jeong taek Kim	Name : Wu ram Lee

KOTITI Testing & Research Institute

Contact Information for technical questions and general inquiries.

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Tested Sample List			
Sample No.	**Sample Description**	**Item No.**	**Material**
1	UVR180	UVR180	adhesive

RoHS, Unit: mg/kg
(EU Directive 2011/65/EU, 2015/863/EU)

Test Conducted	Test Method	RL	Test Results
			1
Lead (Pb)	IEC 62321-5:2013 (Acid digestion and determined by ICP-OES)	5	N.D.
Cadmium (Cd)		2	N.D.
Mercury (Hg)	IEC 62321-4:2013 (Acid digestion and determined by ICP-OES)	1	N.D.
Hexavalent Chromium (Cr^{6+})	IEC 62321-7-2:2017 (Solvent extraction and determined by UV-VIS)	8	N.D.
*** Polybrominated Biphenyls(PBBs)**			
Bromobiphenyl	IEC 62321-6:2015 (Solvent extraction and determined by GC-MS)	5	N.D.
Dibromobiphenyl		5	N.D.
Tribromobiphenyl		5	N.D.
Tetrabromobiphenyl		5	N.D.
Pentabromobiphenyl		5	N.D.
Hexabromobiphenyl		5	N.D.
Heptabromobiphenyl		5	N.D.
Octabromobiphenyl		5	N.D.
Nonabromobiphenyl		5	N.D.
Decabromobiphenyl		5	N.D.
Sum of PBBs		-	N.D.
*** Polybrominated Diphenyl Ethers(PBDEs)**			
Bromodiphenyl ethers		5	N.D.
Dibromodiphenyl ethers		5	N.D.
Tribromodiphenyl ethers		5	N.D.
Tetrabromodiphenyl ethers		5	N.D.
Pentabromodiphenyl ethers		5	N.D.
Hexabromodiphenyl ethers		5	N.D.
Heptabromodiphenyl ethers		5	N.D.
Octabromodiphenyl ethers		5	N.D.
Nonabromodiphenyl ethers		5	N.D.
Decabromodiphenyl ether		5	N.D.
Sum of PBDEs		-	N.D.

Phthalates, Unit: mg/kg
(EU Directive 2011/65/EU, 2015/863/EU)

Test Conducted	Test Method	RL	Test Results
			1
di-n-butyl phthalate (DBP)	IEC 62321-8:2017 (Solvent extraction and determined by GC-MS)	50	N.D.
di(ethylhexyl) phthalate (DEHP)		50	N.D.
butyl benzyl phthalate (BBP)		50	N.D.
diisobutyl phthalate (DIBP)		50	N.D.
1,2-benzenedicarboxylic acid, di-C7-11 branched and linear alkyl esters (DHNUP)		50	N.D.
diisoheptyl phthalate (DIHP)		50	N.D.
Bis(2-methoxyethyl) phthalate (BMP)		50	N.D.
Hexahydromethylphthalic anhydride [1], Hexahydro-4-methylphthalic anhydride [2], Hexahydro-1-methylphthalic anhydride [3], Hexahydro-3-methylphthalic anhydride [4] [The individual isomers [2], [3] and [4] (including their cis- and trans-stereo isomeric forms) and all possible combinations of the isomers [1] are covered by this entry]		50	N.D.
diisopentyl phthalate (DIPP)		50	N.D.
di-n-pentyl phthalate (DnPP)		50	N.D.
N-pentyl-isopentyl phthalate (PIPP)		50	N.D.
di-n-hexyl phthalate (DnHP)		50	N.D.
1.2-Benzenedicarboxylic acid, dihexyl ester, branched and linear		50	N.D.
1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate		50	N.D.
dicyclohexyl phthalate (DCHP)		50	N.D.
di-isononyl phthalate (DINP)		50	N.D.
di-iso-decyl phthalate (DIDP)		50	N.D.
di-n-octyl phthalate (DNOP)		50	N.D.
dimethyl phthalate (DMP)		50	N.D.
diethyl phthalate (DEP)		50	N.D.
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear (DPP)		50	N.D.

Halogen, Unit: mg/kg

Test Conducted	Test Method	RL	Test Results
			1
Chlorine (Cl)	IEC 62321-3-2:2020 & KS M 0180:2009 determined by C-IC	30	52
Bromine (Br)		30	103

Sulfur, Unit: mg/kg

Test Conducted	Test Method	RL	Test Results
			1
Sulfur (S)	IEC 62321-3-2:2020 & KS M 0180:2009 determined by C-IC	30	3 518

Heavy metal, Unit: mg/kg

Test Conducted	Test Method	RL	Test Results
			1
Antimony (Sb)	Reference to EPA 3052:1996 determined by ICP-OES	5	N.D.
Beryllium (Be)		5	N.D.

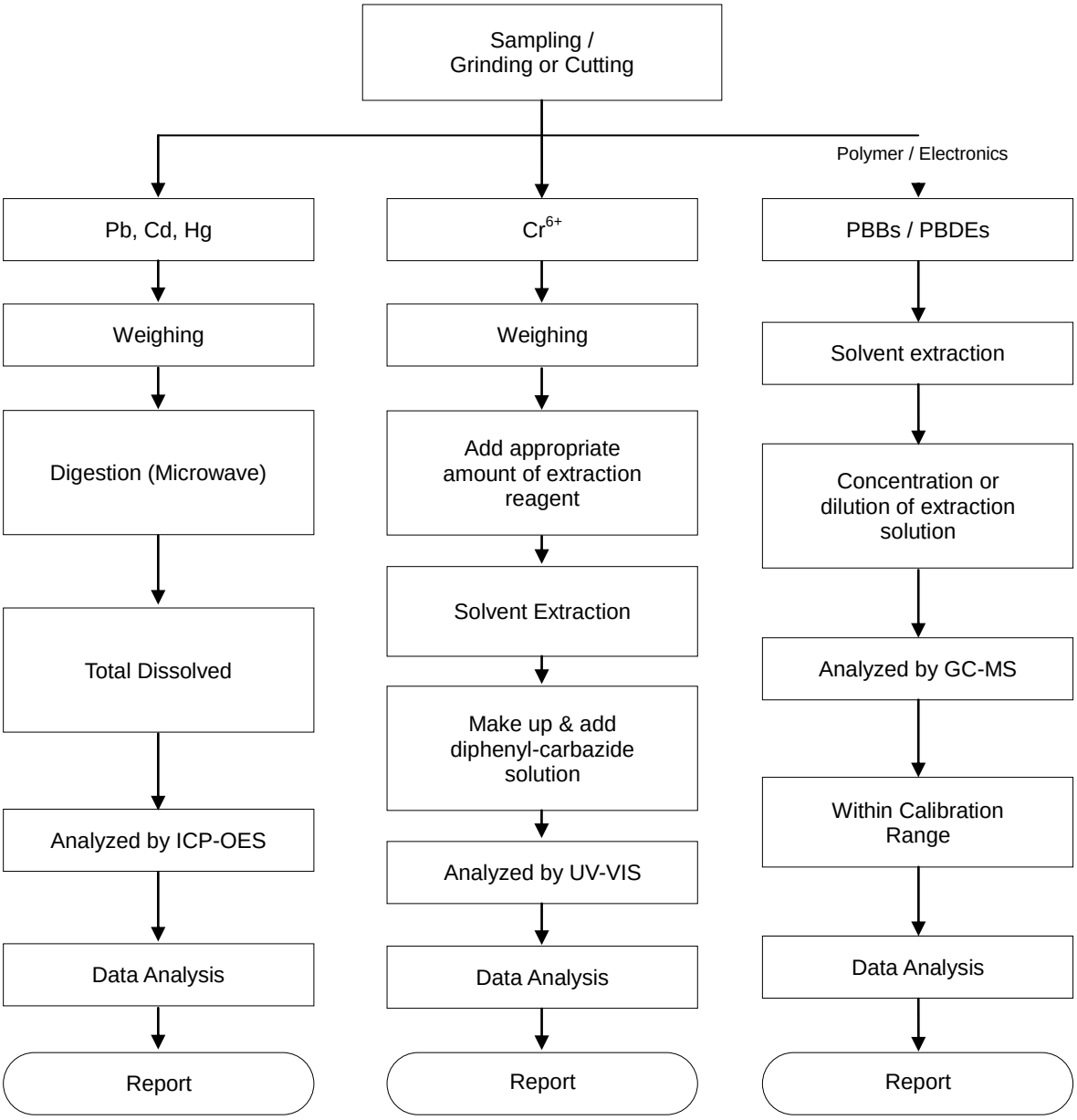
Photo of the submitted sample(s)

Sample No.1	

※ **Remark : The result(s) shown is/are of the total weight of dried sample.**

Flow Chart

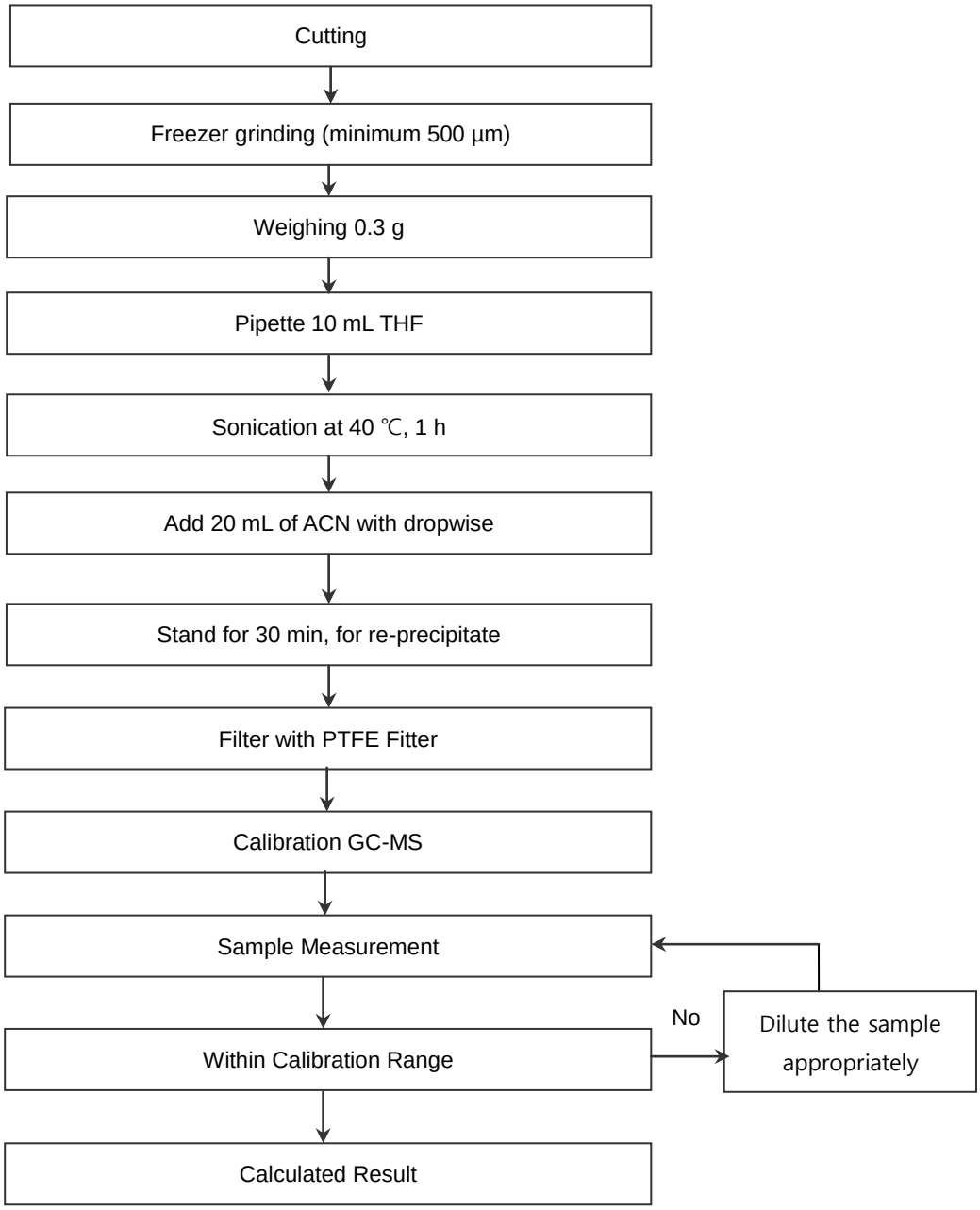
RoHS



Material	Digestion Acid
Polymers	HNO_3, HCl, HF, H_2O_2, H_2SO_4, etc.
Metals	HNO_3, HCl
Electronics	HNO_3, HCl, HF, H_2O_2, H_2SO_4, etc.

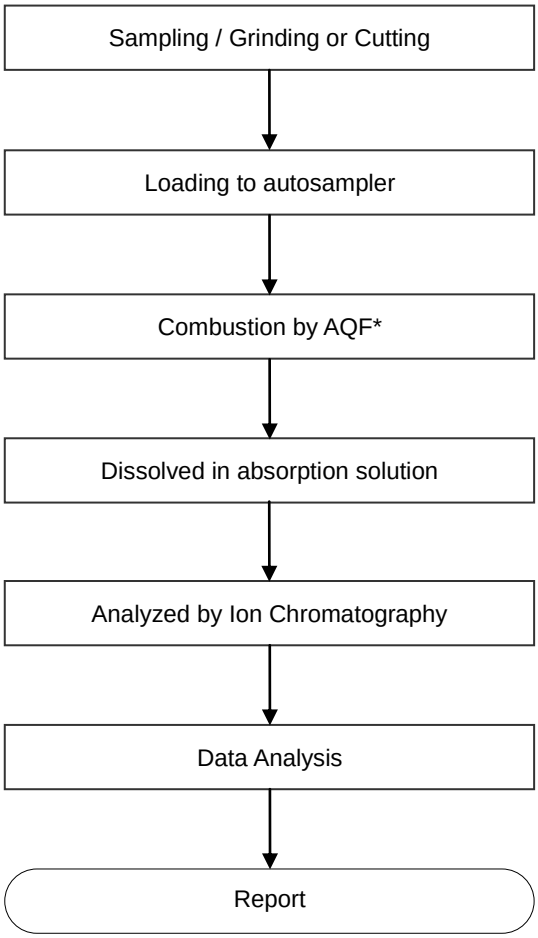
Flow Chart

Phthalates



Flow Chart

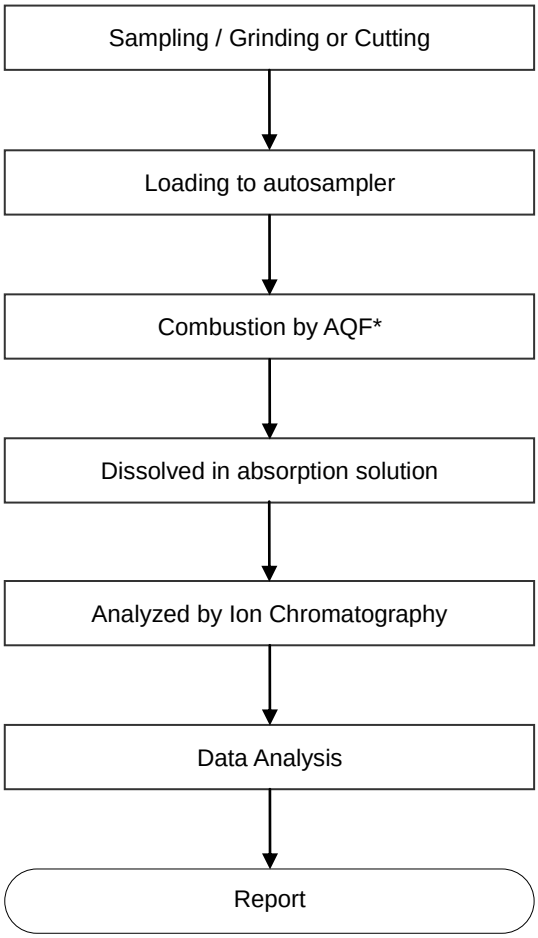
Halogen



*AQF : Automated Quick Furnace

Flow Chart

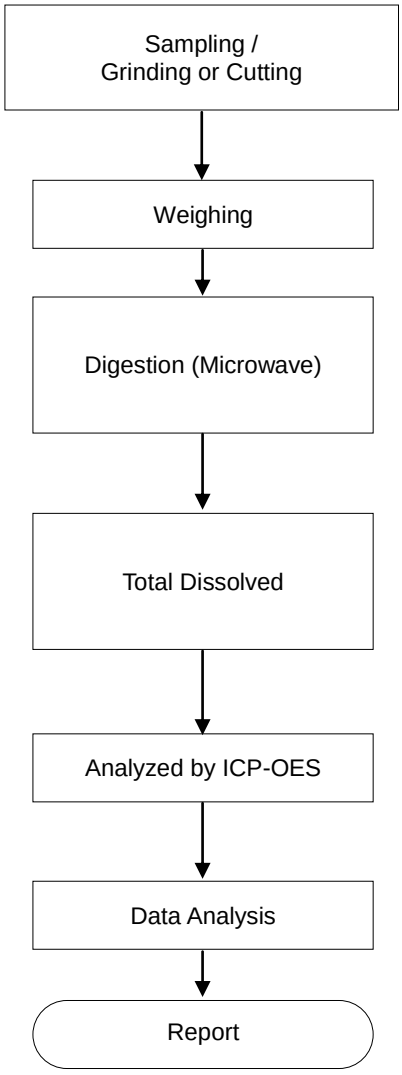
Sulfur



*AQF : Automated Quick Furnace

Flow Chart

Heavy metal



Material	Digestion Acid
Polymers	HNO_3, HCl, HF, H_2O_2, H_2SO_4, etc.
Metals	HNO_3, HCl
Electronics	HNO_3, HCl, HF, H_2O_2, H_2SO_4, etc.