



# TEST REPORT

Report No. : (8224)885-0001-001

Date Issued : 2024. 03. 29

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Company Name : LOTTE MCC CORP.

Address : Lotte World Tower 14th FL, Olympic-ro, Songpa-gu, Seoul, Korea

## Sample Description

Name / Type of Product : MMA

Item No. / Part No. : -

Material/Color : -

Manufacturer/Vendor : -

Date Received : 2024. 03. 25

Test Period : 2024. 03. 25 ~ 2024. 03. 29

Test Type : Wet chemical analysis for restricted substances.

Test Site : Fixed Test Lab (RM908~915 126, Beolmal-ro, Dongan-gu, Anyang-si)

Test Method(s) : For the detail, please the following page(s).

Test Results(s) : For the detail, please the following page(s).



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Authorized by

Bureau Veritas Korea Co., Ltd.  
Consumer Product Services

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Lab Manager / Bureau Veritas Korea CPS

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## TEST RESULT

### Heavy Metals

Test Item	Test Method	Unit	MDL	Result
Lead (Pb)	With reference to International Standard IEC 62321-5: 2013, Determined by ICP-OES.	mg/kg	5	ND
Cadmium (Cd)		mg/kg	0.5	ND
Mercury (Hg)	With reference to International Standard IEC 62321-4: 2013 +AMD1:2017CVS, Determined by ICP-OES.	mg/kg	2	ND
Chromium VI (Cr VI)	With reference to International Standard IEC 62321-7-2 2017, Determined by UV-Vis.	mg/kg	8	ND

### Flame Retardants-PBBs/PBDEs

Monobromobiphenyl	With reference to International Standard IEC 62321-6: 2015, Determined by GC-MS.	mg/kg	5	ND
Dibromobiphenyl		mg/kg	5	ND
Tribromobiphenyl		mg/kg	5	ND
Tetrabromobiphenyl		mg/kg	5	ND
Pentabromobiphenyl		mg/kg	5	ND
Hexabromobiphenyl		mg/kg	5	ND
Heptabromobiphenyl		mg/kg	5	ND
Octabromobiphenyl		mg/kg	5	ND
Nonabromobiphenyl		mg/kg	5	ND
Decabromobiphenyl		mg/kg	5	ND
Monobromodiphenyl ether	With reference to International Standard IEC 62321-6: 2015, Determined by GC-MS.	mg/kg	5	ND
Dibromodiphenyl ether		mg/kg	5	ND
Tribromodiphenyl ether		mg/kg	5	ND
Tetrabromodiphenyl ether		mg/kg	5	ND
Pentabromodiphenyl ether		mg/kg	5	ND
Hexabromodiphenyl ether		mg/kg	5	ND
Heptabromodiphenyl ether		mg/kg	5	ND
Octabromodiphenyl ether		mg/kg	5	ND
Nonabromodiphenyl ether		mg/kg	5	ND
Decabromodiphenyl ether		mg/kg	5	ND

Note / Key :

mg/kg = milligram(s) per kilogram = ppm = part(s) per million  
% = weight by weight percentage  
ug/cm<sup>2</sup> = Microgram per square centimeter  
MDL = Method detection limit  
ND = Not detected  
NA = Not applicable



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## TEST RESULT

### Phthalates

Test Item	Test Method	Unit	MDL	Result
Dibutyl phthalate (DBP)	With reference to IEC 62321-8: 2017, Determined by GC-MS & LC-MS.	mg/kg	50	ND
Bis(2-ethylhexyl) phthalate (DEHP)		mg/kg	50	ND
Diisobutyl phthalate (DIBP)		mg/kg	50	ND
Benzyl butyl phthalate (BBP)		mg/kg	50	ND

Note / Key :

mg/kg = milligram(s) per kilogram = ppm = part(s) per million

MDL = Method detection limit

ND = Not detected

NA = Not applicable

### List of Phthalates [ European Parliament and Council Directive 2011/65/EU ] :

No.	Name of Analyte(s)	CAS-No.
1	Dibutyl phthalate (DBP)	84-74-2
2	Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7
3	Diisobutyl phthalate (DIBP)	84-69-5
4	Benzyl butyl phthalate (BBP)	85-68-7



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## TEST RESULT

### Halogen Content

Test Item	Test Method	Unit	MDL	Result
Bromine (Br)	With reference to EN14582:2016, Determined by IC.	mg/kg	30	ND
Chlorine (Cl)		mg/kg	30	ND
Fluorine (F)		mg/kg	30	ND
Iodine (I)		mg/kg	30	ND

#### Note / Key :

mg/kg = milligram(s) per kilogram = ppm = part(s) per million

MDL = Method detection limit

ND = Not detected

NA = Not applicable



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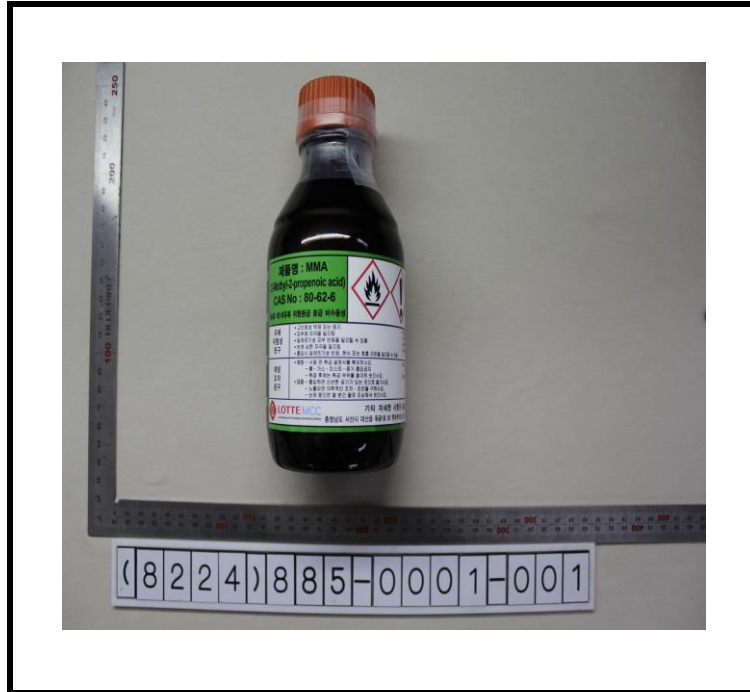
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## Photo of the Submitted Sample





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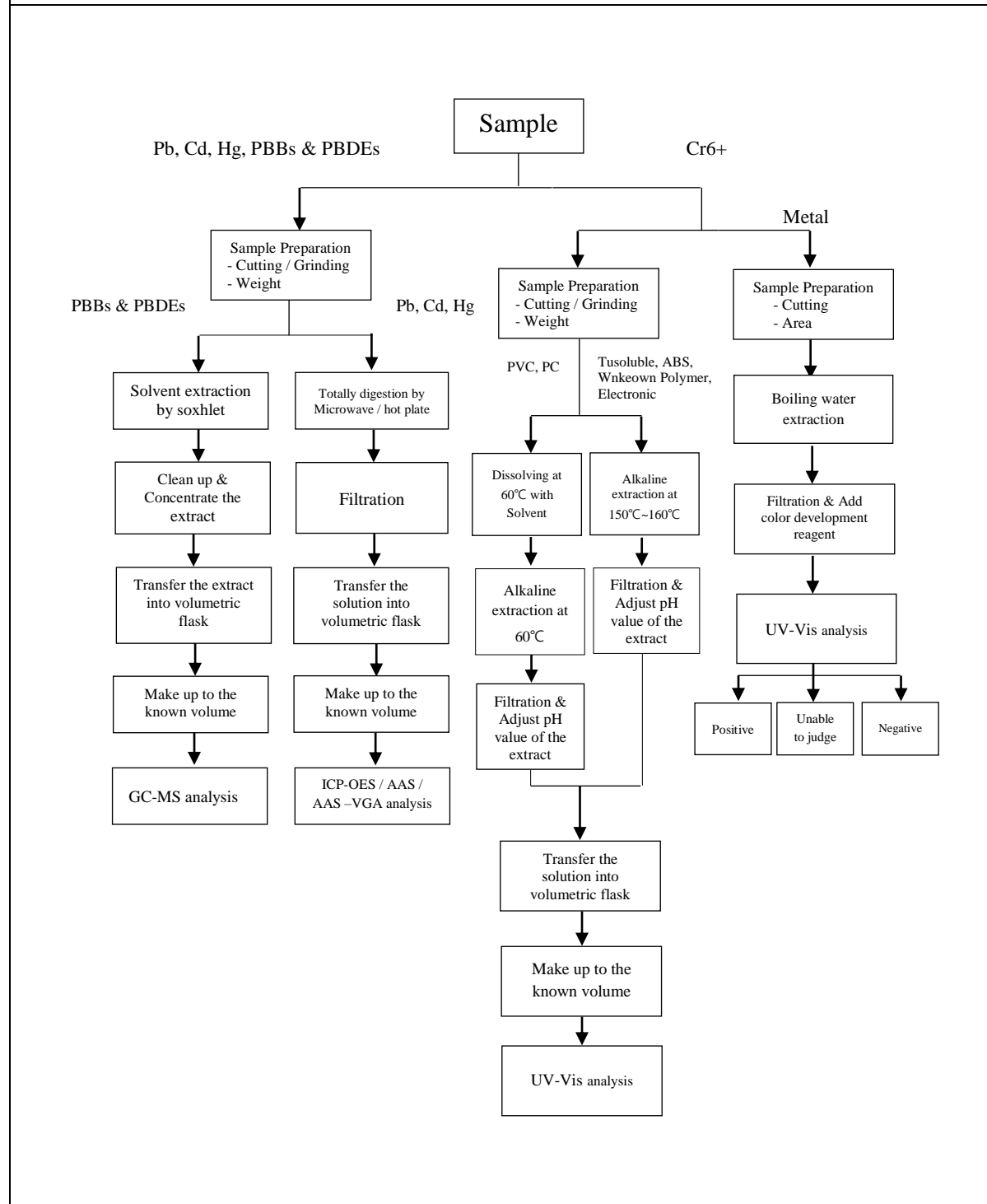
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## Test Flowchart of Heavy Metals and Flame Retardants Content [ European Parliament and Council Directive 2011/65/EU ] :





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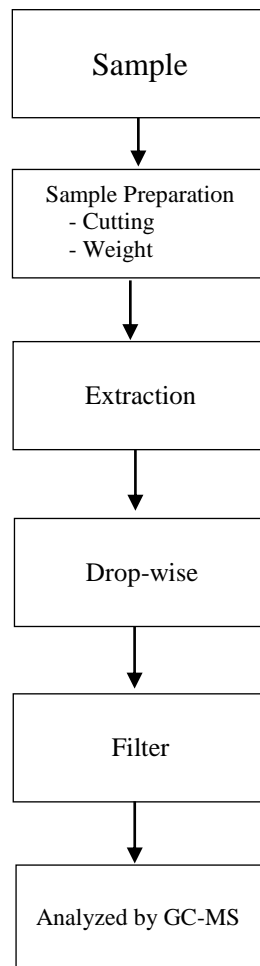
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## Test Flowchart of Phthalates Content





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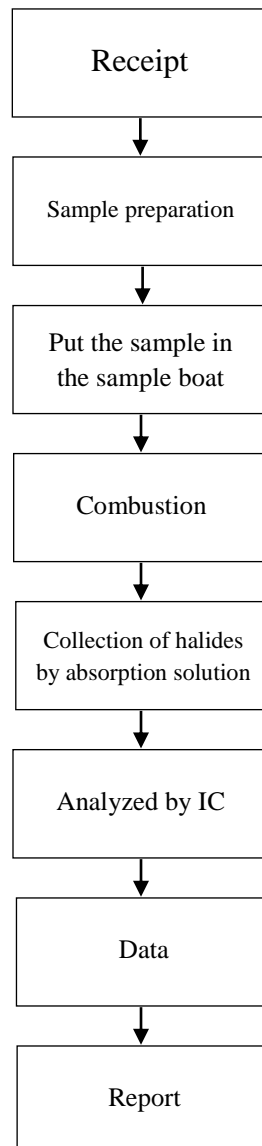
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## Test Flowchart of Halogen Content



- End of Report -