

Test Report No. ETLR180517.0730

Page 1 of 6

Applicant : JOYLIFE Co., Ltd.
1400, Nakdong-daero, Sasang-gu, Busan, Republic of Korea

The following sample(s) was/were submitted and identified on behalf of the applicant as: -

Sample Name : PET bag

Sample ID/Description : -

Date of receipt : May 17, 2018

Test Period : May 17 ~ 24, 2018

Date of issue : May 25, 2018

Testing Environment

Temperature : (24.0 ± 1.2) °C

Relative Humidity : (54 ± 15) %

For further details, please refer to the following pages.

Tested by :



Na Rae Kim

Reviewed by :



Jeong Ryeol Baik

Test Report No. ETLR180517.0730

Page 2 of 6

■ Result

Polybrominated biphenyls (PBBs)

Item(s)	Unit	Test Method	MDL	Result
Monobromobiphenyl	mg/kg	IEC 62321-6 : 2015, 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 ethers (PBDEs)

Item(s)	Unit	Test Method	MDL	Result
Monobromodiphenyl ether	mg/kg	IEC 62321-6 : 2015, 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.

Test Report No. ETLR180517.0730

Page 3 of 6

■ Result

Heavy metal

Item(s)	Unit	Test Method	MDL	Result
Cadmium (Cd)	mg/kg	IEC 62321-5 : 2013, ICP-OES.	1	N.D.
Lead (Pb)	mg/kg		5	N.D.
Mercury (Hg)	mg/kg	IEC 62321-4 : 2013, ICP-OES.	5	N.D.
Hexavalent Chromium (Cr ⁶⁺)	mg/kg	IEC 62321-7-2 : 2017, UV-VIS.	1	N.D.

Phthalate

Item(s)	CAS No.	Unit	Test Method	MDL	Result
Diisobutyl phthalate (DIBP)	84-69-5	mg/kg	IEC 62321-8 : 2017, GC-MS.	50	N.D.
Di-n-butyl phthalate (DBP)	84-74-2	mg/kg		50	N.D.
Benzyl butyl phthalate (BBP)	85-68-7	mg/kg		50	N.D.
Di(2-ethyl hexyl) phthalate (DEHP)	117-81-7	mg/kg		50	N.D.

* Note :

MDL = Method detection limit
 N.D. = Not detected
 Negative = Undetectable / Positive = Detectable
 mg/kg = ppm (part per million)

Test Report No. ETLR180517.0730

Page 4 of 6

■ Photograph



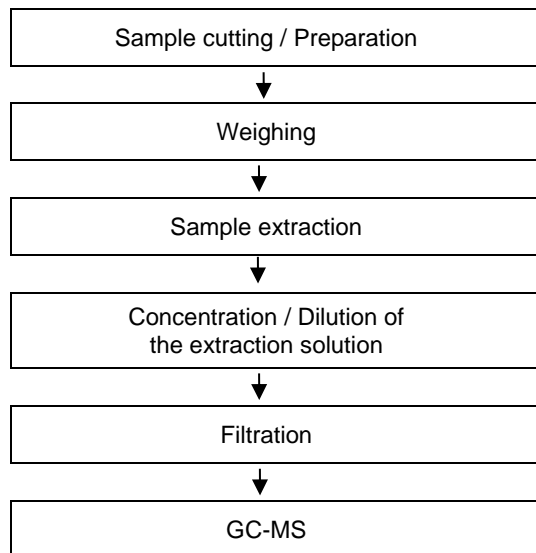
The tested sample is marked by an arrow if it's shown on the photograph.

Test Report No. ETLR180517.0730

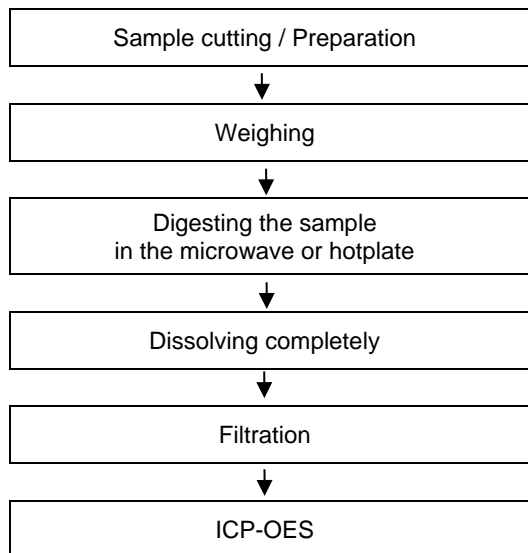
Page 5 of 6

■ Flow chart

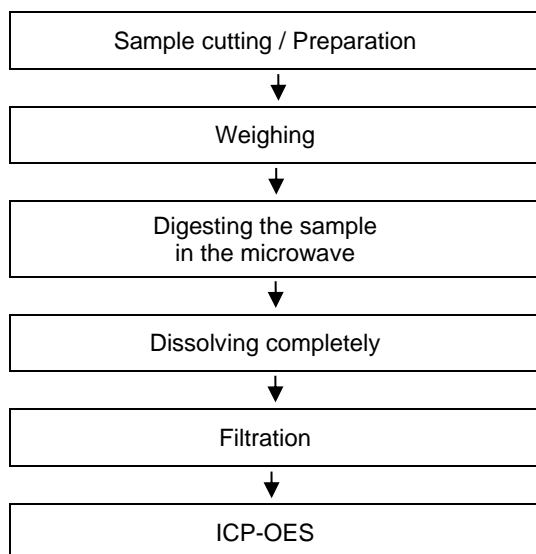
PBBs, PBDEs



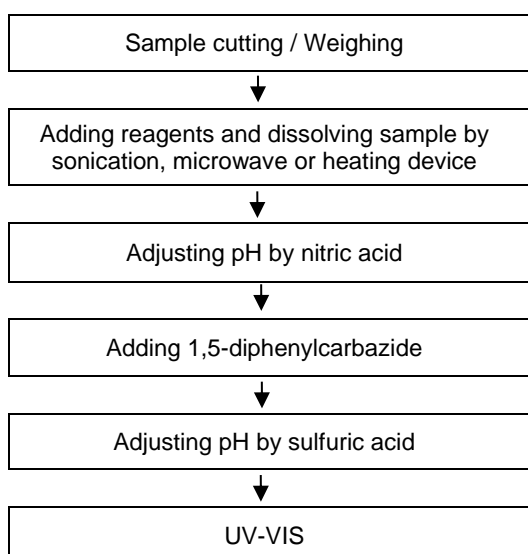
Cd, Pb



Hg



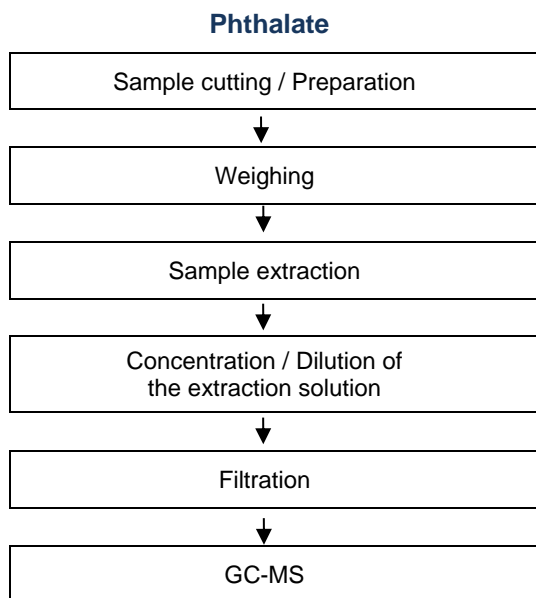
Cr⁶⁺



Test Report No. ETLR180517.0730

Page 6 of 6

■ Flow chart



- E N D -