

**TEST REPORT****No: BKKHL250005579****Issue Date: 15-Sep-2025 Page 1 of 10****PANASONIC MANUFACTURING AYUTHAYA CO., LTD.****1/69 MOO 5, ROJANA ROAD, TAMBOL KANHAM, AMPHUR UTHAI, AYUTHAYA, 13210 THAILAND**

The following sample(s) was/were submitted and identified by the client as:

Sample Name : Compounded Plastic (Epoxy Encapsulation Material)
Part No. : 3400FPG-9
Batch / Lot No. : 580519
Country of Origin : Thailand
Buyer's Name : Panasonic Group

The following sample(s) was/were identified by SGS as:

Sample Number : BKK25-0006097-0001
Sample Condition : Sample is contained in plastic bag.
Quantity Submitted : 10 pcs
Sample Received Date : Sep 08 2025
Testing Period : Sep 08 - Sep 15 2025
Test Requested : In accordance with the EU RoHS Directive 2011/65/EU (Annex II) [amended by Directive (EU) 2015/863]. Selected test (s) as requested by client.
Test Method(s) : Please refer to next page(s)
Test Result(s) : Please refer to next page(s)
Conclusion : Based on the performed tests on submitted sample(s), the results of Cadmium (Cd), Lead (Pb), Mercury (Hg), Hexavalent chromium (Cr-VI), Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) and Phthalates such as Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP) comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU where the decision rules based on simple acceptance which the probability of false accept may be as high as 50% in case the results is exactly on the tolerance limit.

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Signed for and on behalf of
SGS (Thailand) Limited

Patcharee T.

Patcharee Treeporncharoen
Lab Manager - Chemical



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Test Result(s) :

Test Item(s)	Unit	Method	Result (1)	MDL	Limit
Lead(Pb)**	mg/kg	With reference to IEC 62321-5:2013, analysis was performed by ICP-OES.	ND	2	1000
Cadmium(Cd)**	mg/kg	With reference to IEC 62321-5:2013, analysis was performed by ICP-OES.	ND	2	100
Mercury(Hg)**	mg/kg	With reference to IEC 62321-4:2013+AMD1:2017, analysis was performed by ICP-OES.	ND	2	1000
Hexavalent Chromium(CrVI)**	mg/kg	With reference to IEC-62321-7-2 edition 1.0:2017-03, analysis was performed by UV-Vis. and/or With reference to IEC-62321-5 edition 1.0:2013-6, analysis was performed by ICP-OES	ND	8	1000
Polybrominated biphenyls (PBB)**	mg/kg	With reference to IEC 62321-6:2015, analysis was performed by GC-MS.	ND	-	1000
Monobrominated biphenyl (MonoBB)**	mg/kg	With reference to IEC 62321-6:2015, analysis was performed by GC-MS.	ND	5	-
Dibrominated biphenyl (DiBB)**	mg/kg	With reference to IEC 62321-6:2015, analysis was performed by GC-MS.	ND	5	-
Tribrominated biphenyl (TriBB)**	mg/kg	With reference to IEC 62321-6:2015, analysis was performed by GC-MS.	ND	5	-
Tetrabrominated biphenyl (TetraBB)**	mg/kg	With reference to IEC 62321-6:2015, analysis was performed by GC-MS.	ND	5	-
Pentabrominated biphenyl (PentaBB)**	mg/kg	With reference to IEC 62321-6:2015, analysis was performed by GC-MS.	ND	5	-
Hexabrominated biphenyl (HexaBB)**	mg/kg	With reference to IEC 62321-6:2015, analysis was performed by GC-MS.	ND	5	-
Heptabrominated biphenyl (HeptaBB)**	mg/kg	With reference to IEC 62321-6:2015, analysis was performed by GC-MS.	ND	5	-
Octabrominated biphenyl (OctaBB)**	mg/kg	With reference to IEC 62321-6:2015, analysis was performed by GC-MS.	ND	5	-
Nonabrominated biphenyl (NonaBB)**	mg/kg	With reference to IEC 62321-6:2015, analysis was performed by GC-MS.	ND	5	-
Decabrominated biphenyl (DecaBB)**	mg/kg	With reference to IEC 62321-6:2015, analysis was performed by GC-MS.	ND	5	-
Polybrominated diphenyl ether (PBDE)**	mg/kg	With reference to IEC 62321-6:2015, analysis was performed by GC-MS.	ND	-	1000

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Test Item(s)	Unit	Method	Result (1)	MDL	Limit
Monobrominated diphenyl ether (MonoBDE)**	mg/kg	With reference to IEC 62321-6:2015, analysis was performed by GC-MS.	ND	5	-
Dibrominated diphenyl ether (DiBDE)**	mg/kg	With reference to IEC 62321-6:2015, analysis was performed by GC-MS.	ND	5	-
Tribrominated diphenyl ether (TriBDE)**	mg/kg	With reference to IEC 62321-6:2015, analysis was performed by GC-MS.	ND	5	-
Tetrabrominated diphenyl ether (TetraBDE)**	mg/kg	With reference to IEC 62321-6:2015, analysis was performed by GC-MS.	ND	5	-
Pentabrominated diphenyl ether (PentaBDE)**	mg/kg	With reference to IEC 62321-6:2015, analysis was performed by GC-MS.	ND	5	-
Hexabrominated diphenyl ether (HexaBDE)**	mg/kg	With reference to IEC 62321-6:2015, analysis was performed by GC-MS.	ND	5	-
Heptabrominated diphenyl ether (HeptaBDE)**	mg/kg	With reference to IEC 62321-6:2015, analysis was performed by GC-MS.	ND	5	-
Octabrominated diphenyl ether (OctaBDE)**	mg/kg	With reference to IEC 62321-6:2015, analysis was performed by GC-MS.	ND	5	-
Nonabrominated diphenyl ether (NonaBDE)**	mg/kg	With reference to IEC 62321-6:2015, analysis was performed by GC-MS.	ND	5	-
Decabrominated diphenyl ether (DecaBDE)**	mg/kg	With reference to IEC 62321-6:2015, analysis was performed by GC-MS.	ND	5	-
Dibutyl Phthalate(DBP)**	mg/kg	With reference to IEC 62321-8 : 2017, Analysis was performed by GC-MS	ND	50	1000
Benzyl Butyl Phthalate(BBP)**	mg/kg	With reference to IEC 62321-8 : 2017, Analysis was performed by GC-MS	ND	50	1000
Bis-(2-ethylhexyl) Phthalate(DEHP)**	mg/kg	With reference to IEC 62321-8 : 2017, Analysis was performed by GC-MS	ND	50	1000
Diisobutyl Phthalate(DIBP)**	mg/kg	With reference to IEC 62321-8 : 2017, Analysis was performed by GC-MS	ND	50	1000

Test part description

Result (1) : Black compound

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Note :

- (a) mg/kg = ppm ; 0.1wt% = 1000 ppm
- (b) ND = Not Detected (Less than MDL)
- (c) MDL = Method Detection Limit
- (d) The result of Hexavalent Chromium (Cr(VI)) is "ND" as the result of Chromium (Cr) is "ND", and confirmation test of Hexavalent Chromium (Cr(VI)) is not required.
- (e) If the Chromium (Cr) content is greater than the MDL of Hexavalent Chromium (Cr(VI)), confirmation test of Hexavalent Chromium (Cr(VI)) is required.
- (f) "-" = Not regulated
- (g) Test done on client submitted sample

Remarks :

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.
- (2) IEC 62321 series is equivalent to EN 62321 series.
- (3) The restriction of DEHP, BBP, DBP and DIBP shall apply to medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, from 22 July 2021

Test(s) marked ** on test report is/are analyzed at SGS (Thailand) Ltd, address: 10,10/1-4 and 12 Soi Rama III S.59, Chong Nonsi, Yan Nawa, Bangkok.

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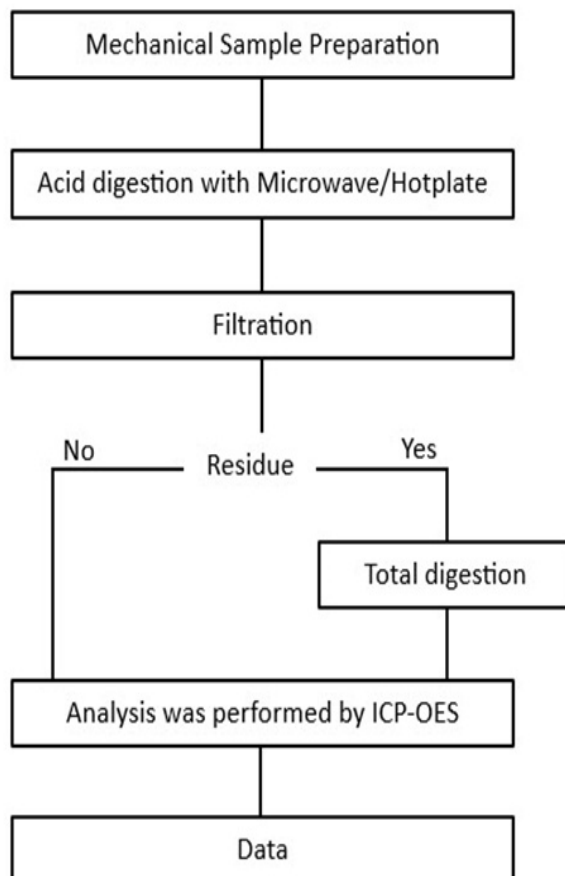
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Flow chart of Pb, Cd, Hg Testing

(Test method : IEC 62321)



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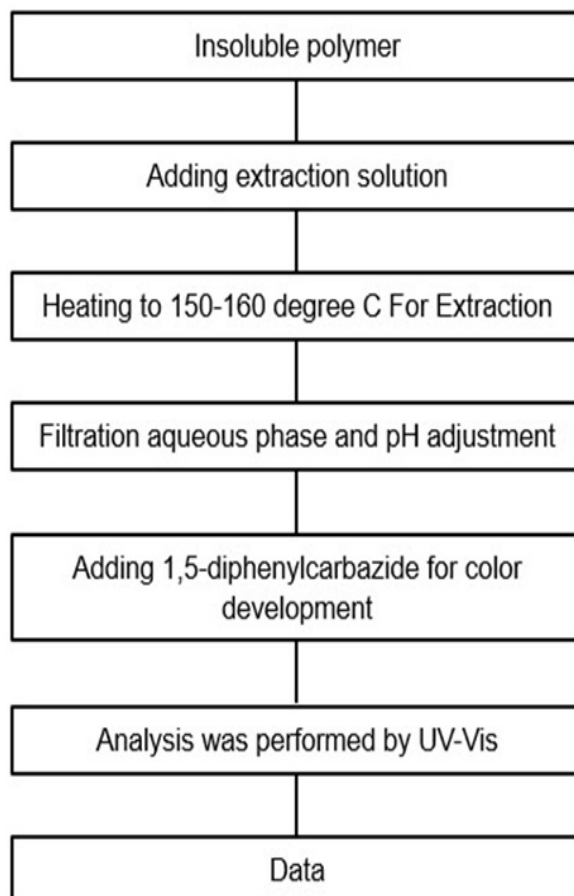
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Flow chart of Hexavalent Chromium Testing

(Test method : IEC 62321)



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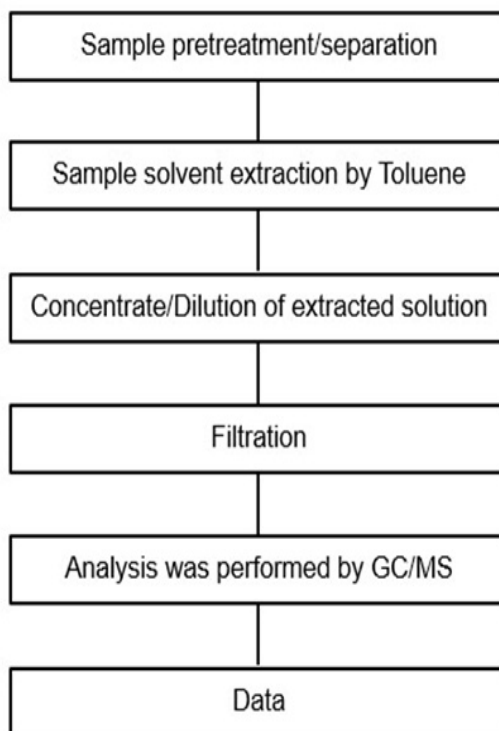
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Flow chart of PBBs, PBDEs Testing

(Test method : IEC 62321)



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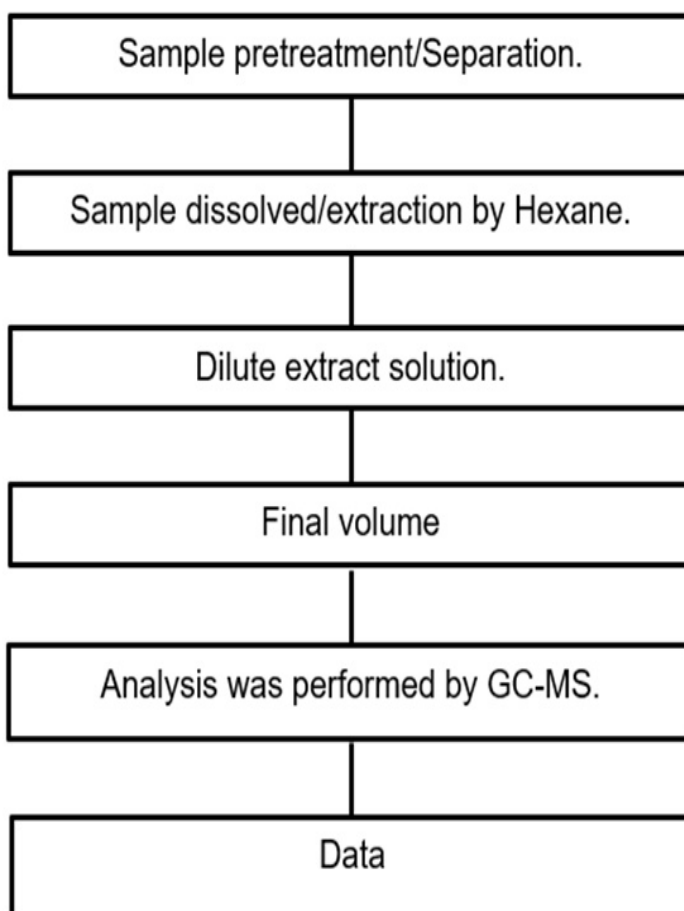
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Flow chart of Phthalates Analysis

(Test method : IEC 62321)



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Sample Photo:



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End of Report

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