

# Test Report

No. CANEC2218342705

Date: 02 Sep 2022

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Client Name : UNIROYAL ELECTRONICS INDUSTRY(KUNSHAN) CO.,LTD.

Client Address : 88 LONGTENG ROAD, ECONOMIC & TECHNICAL DEVELOPMENT ZONE, KUNSHAN CITY, JIANGSU, CHINA

Sample Name : Metal Foil Wide Terminal Current Sensing Chip Resistors  
 Buyer : Uniroyal Electronics Global Co.,Ltd  
 Supplier : Uniroyal Electronics Industry Co., Ltd  
 Aeon Technology Corporation Co.,Ltd.  
 Royal Electronic Factory (Thailand) Co.,Ltd.  
 Royal Technology (Thailand) Co.,Ltd.

The above sample(s) and information were provided by the client.

SGS Job No. : 22957921 - XM  
 Date of Sample Received : 26 Aug 2022  
 Testing Period : 26 Aug 2022 - 01 Sep 2022  
 Test Requested : Selected test(s) as requested by the client.  
 Test Method(s) : Please refer to next page(s).  
 Test Result(s) : Please refer to next page(s).

Result Summary :

| Test Requested   | Conclusion  |
|--|-------------|
| EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU- Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP) | PASS        |
| Halogen  | See Results |



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Signed for and on behalf of  
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

*Dongyu Xie*

Dongyu Xie  
Approved Signatory

scan to see the report



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SGS-CSTC Standards Technical Services Co., Ltd.  
Guangzhou Branch Testing Center Chemical Laboratory.

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Test Result(s) :

Test Part Description :

| Specimen No. | SGS Sample ID    | Description   |
|--------------|------------------|---|
| SN1          | CAN22-183427.003 | "Metal Foil Wide Terminal Current Sensing Chip Resistors" |

Remarks :

- (1) 1 mg/kg = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected ( < MDL )
- (4) "-" = Not Regulated

**EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU- Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)**

Test Method : With reference to IEC 62321-4:2013+A1:2017, IEC 62321-5:2013, IEC 62321-7-2:2017 , IEC 62321-6:2015 and IEC 62321-8:2017, analyzed by ICP-OES , UV-Vis and GC-MS .

| <u>Test Item(s)</u>        | <u>Limit</u> | <u>Unit</u> | <u>MDL</u> | <u>003</u> |
|----------------------------|--------------|-------------|------------|------------|
| Cadmium (Cd)               | 100          | mg/kg       | 2          | ND         |
| Lead (Pb)                  | 1000         | mg/kg       | 2          | ND         |
| Mercury (Hg)               | 1000         | mg/kg       | 2          | ND         |
| Hexavalent Chromium (CrVI) | 1000         | mg/kg       | 8          | ND         |
| Sum of PBBs                | 1000         | mg/kg       | -          | ND         |
| Monobromobiphenyl          | -            | 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         |
| Sum of PBDEs               | 1000         | mg/kg       | -          | ND         |
| Monobromodiphenyl ether    | -            | mg/kg       | 5          | ND         |
| Dibromodiphenyl ether      | -            | mg/kg       | 5          | ND         |
| Tribromodiphenyl ether     | -            | mg/kg       | 5          | ND         |
| Tetrabromodiphenyl ether   | -            | mg/kg       | 5          | ND         |



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| <u>Test Item(s)</u>                 | <u>Limit</u> | <u>Unit</u> | <u>MDL</u> | <u>003</u> |
|-------------------------------------|--------------|-------------|------------|------------|
| 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         |
| Dibutyl phthalate (DBP)             | 1000         | mg/kg       | 50         | ND         |
| Butyl benzyl phthalate (BBP)        | 1000         | mg/kg       | 50         | ND         |
| Bis (2-ethylhexyl) phthalate (DEHP) | 1000         | mg/kg       | 50         | ND         |
| Diisobutyl Phthalates (DIBP)        | 1000         | mg/kg       | 50         | ND         |

### Notes :

- (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.

### Halogen

Test Method : With reference to EN 14582:2016, analysis was performed by IC.

| <u>Test Item(s)</u> | <u>Unit</u> | <u>MDL</u> | <u>003</u> |
|---------------------|-------------|------------|------------|
| Fluorine (F)        | mg/kg       | 50         | ND         |
| Chlorine (Cl)       | mg/kg       | 50         | ND         |
| Bromine (Br)        | mg/kg       | 50         | ND         |
| Iodine (I)          | mg/kg       | 50         | ND         |

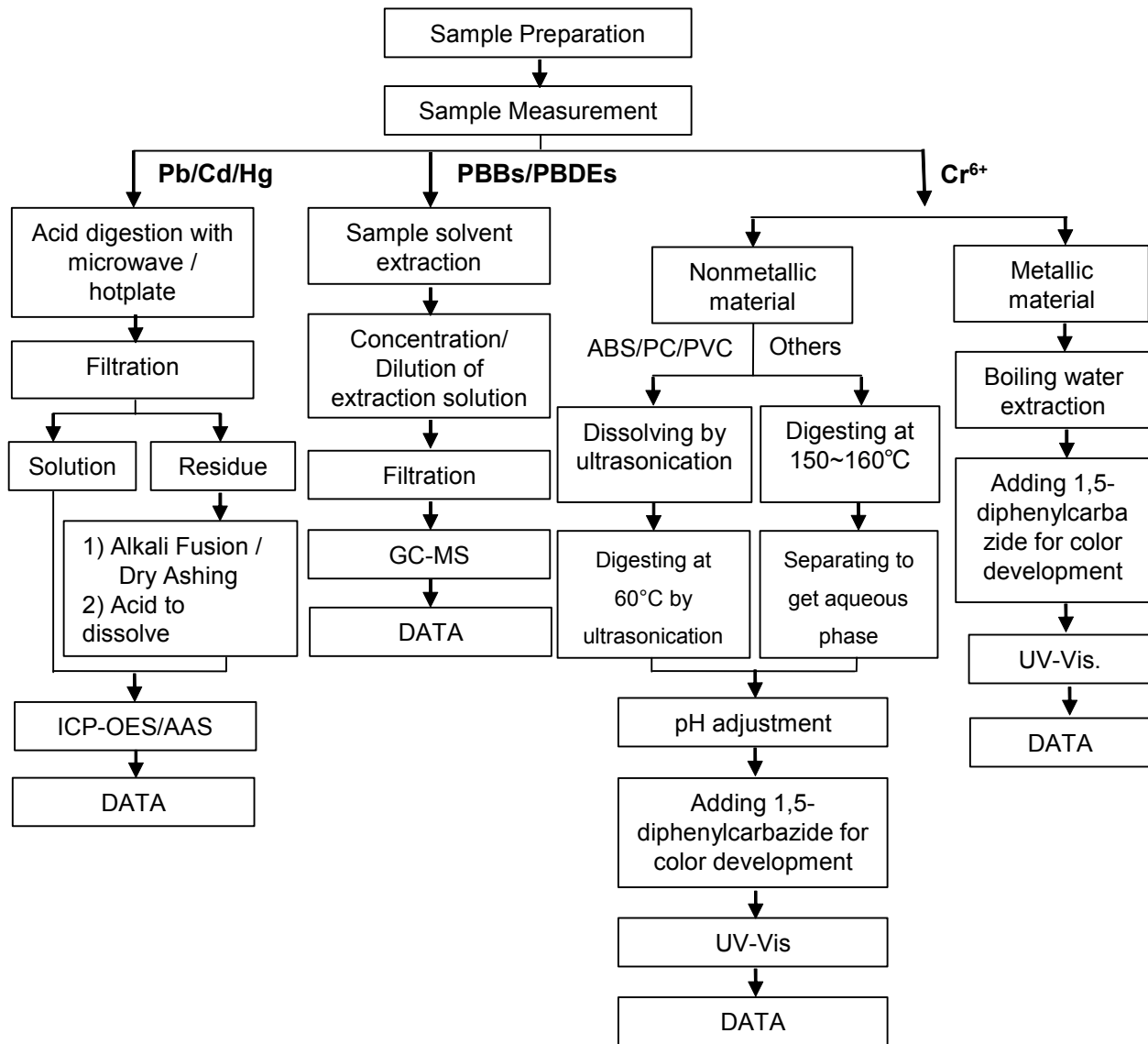
Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule ( $w=0$ ) stated in ILAC-G8:09/2019.



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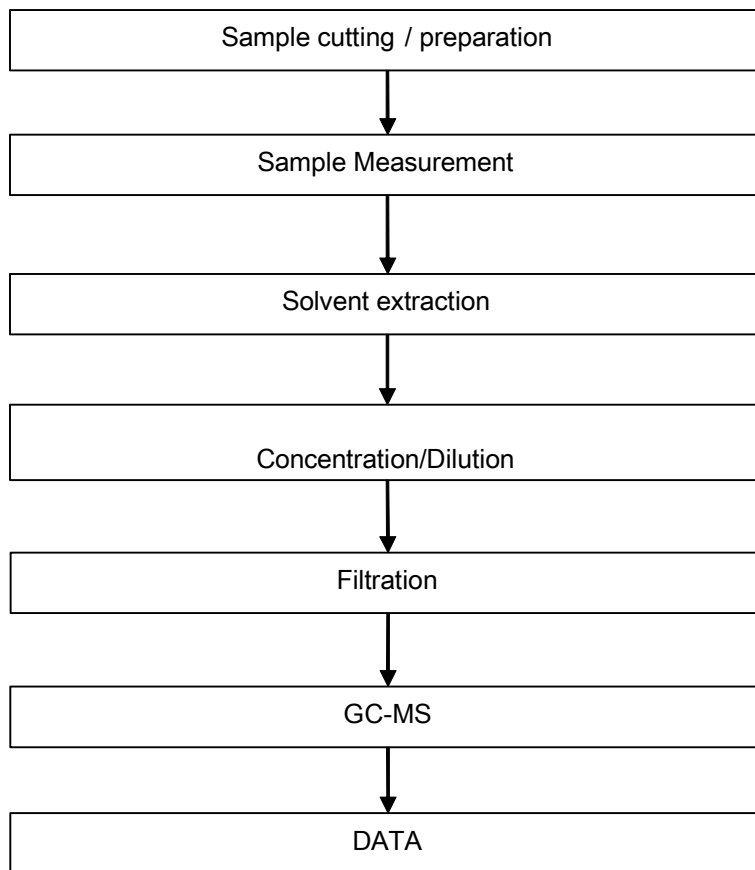
**Pb/Cd/Hg/Cr<sup>6+</sup>/PBBs/PBDEs Testing Flow Chart**

1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr<sup>6+</sup> and PBBs/PBDEs test method excluded).



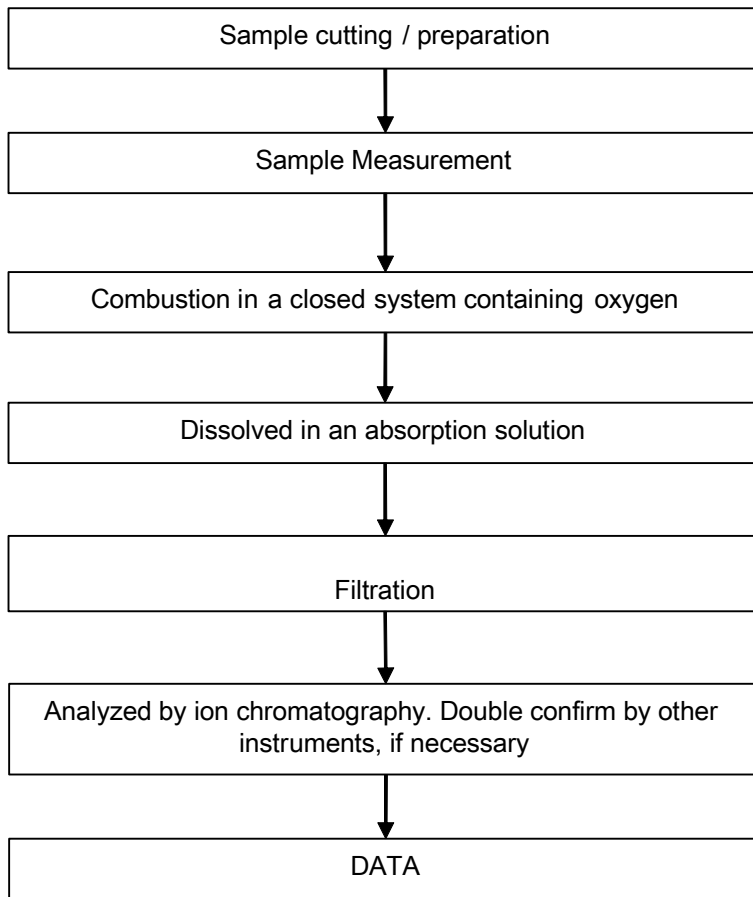
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### Phthalates Testing Flow Chart



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Halogen Testing Flow Chart



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