

## TEST REPORT

APPLICANT : LG Chem, Ltd.

ADDRESS : 30, Magokjungang 10-ro, Gangseo-gu,  
Seoul, Korea

PAGE: 1 of 6

REPORT NO. RT23R-S0617-015-E

DATE: Feb. 08, 2023

SAMPLE DESCRIPTION : The following submitted sample(s) said to be:-

NAME/TYPE OF PRODUCT : MRC365L1

SAMPLE ID NO. : RT23R-S0617-015

MANUFACTURER/VENDOR : LG Chem, Ltd.

SAMPLE RECEIVED : Jan. 30, 2023

TESTING DATE : Jan. 30, 2023 ~ Feb. 08, 2023

TEST METHOD(S) : Please see the following page(s).

TEST RESULT(S) : Please see the following page(s).

\* Note 1 : The test results presented in this report refer only to the object tested.

\* Note 2 : This report shall not be reproduced except in full without the written approval of the testing laboratory.

Approved by,



Jade Jang / Lab. Technical Manager

Authorized by,



Bo Park / Lab. General Manager



Authenticity check

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DATE: Feb. 08, 2023

SAMPLE ID NO. : RT23R-S0617-015

SAMPLE DESCRIPTION : MRC365L1

| TEST ITEM                               | UNIT  | TEST METHOD                                                                                                                                 | MDL | RESULT |
|-----------------------------------------|-------|---------------------------------------------------------------------------------------------------------------------------------------------|-----|--------|
| Cadmium (Cd)                            | mg/kg | With reference to<br>IEC 62321-5 Edition 1.0 : 2013,<br>by acid digestion and<br>determined by ICP-OES                                      | 0.5 | N.D.   |
| Lead (Pb)                               | mg/kg |                                                                                                                                             | 5   | N.D.   |
| Mercury (Hg)                            | mg/kg | With reference to<br>IEC 62321-4 : 2013/AMD1 :<br>2017, by acid digestion and<br>determined by ICP-OES                                      | 2   | N.D.   |
| Hexavalent Chromium (Cr <sup>6+</sup> ) | mg/kg | With reference to<br>IEC 62321-7-2<br>Edition 1.0 : 2017,<br>by alkaline/toluene digestion<br>and determined by UV-VIS<br>Spectrophotometer | 8   | N.D.   |
| Polybrominated Biphenyl (PBBs)          |       |                                                                                                                                             |     |        |
| Monobromobiphenyl                       | mg/kg | With reference to<br>IEC 62321-6 Edition 1.0 : 2015,<br>by solvent extraction and<br>determined by 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 Ether (PBDEs)   |       |                                                                                                                                             |     |        |
| Monobromodiphenyl ether                 | mg/kg | With reference to<br>IEC 62321-6 Edition 1.0 : 2015,<br>by solvent extraction and<br>determined by 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.   |

Tested by : Jooyeon Lee, Chano Kim, Hayan Park

Notes : mg/kg = ppm = parts per million  
 < = Less than  
 N.D. = Not detected ( <MDL )  
 MDL = Method detection limit

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SAMPLE ID NO. : RT23R-S0617-015

SAMPLE DESCRIPTION : MRC365L1

| TEST ITEM                         | CAS NO.                  | UNIT  | TEST METHOD                                                                                     | MDL | RESULT |
|-----------------------------------|--------------------------|-------|-------------------------------------------------------------------------------------------------|-----|--------|
| Dibutyl phthalate (DBP)           | 84-74-2                  | mg/kg | With reference to IEC 62321-8 Edition 1.0 : 2017, by solvent extraction and determined by GC/MS | 50  | N.D.   |
| Di(2-ethylhexyl) phthalate (DEHP) | 117-81-7                 | mg/kg |                                                                                                 | 50  | N.D.   |
| Di-n-octyl phthalate (DNOP)       | 117-84-0                 | mg/kg |                                                                                                 | 50  | N.D.   |
| Diisononyl phthalate (DINP)       | 28553-12-0<br>68515-48-0 | mg/kg |                                                                                                 | 100 | N.D.   |
| Diisodecyl phthalate (DIDP)       | 26761-40-0<br>68515-49-1 | mg/kg |                                                                                                 | 100 | N.D.   |
| Benzyl butyl phthalate (BBP)      | 85-68-7                  | mg/kg |                                                                                                 | 50  | N.D.   |
| Diisobutyl phthalate (DIBP)       | 84-69-5                  | mg/kg |                                                                                                 | 50  | N.D.   |
| Dimethyl phthalate (DMP)          | 131-11-3                 | mg/kg |                                                                                                 | 50  | N.D.   |
| Diethyl phthalate (DEP)           | 84-66-2                  | mg/kg |                                                                                                 | 50  | N.D.   |

Tested by : Hayan Park

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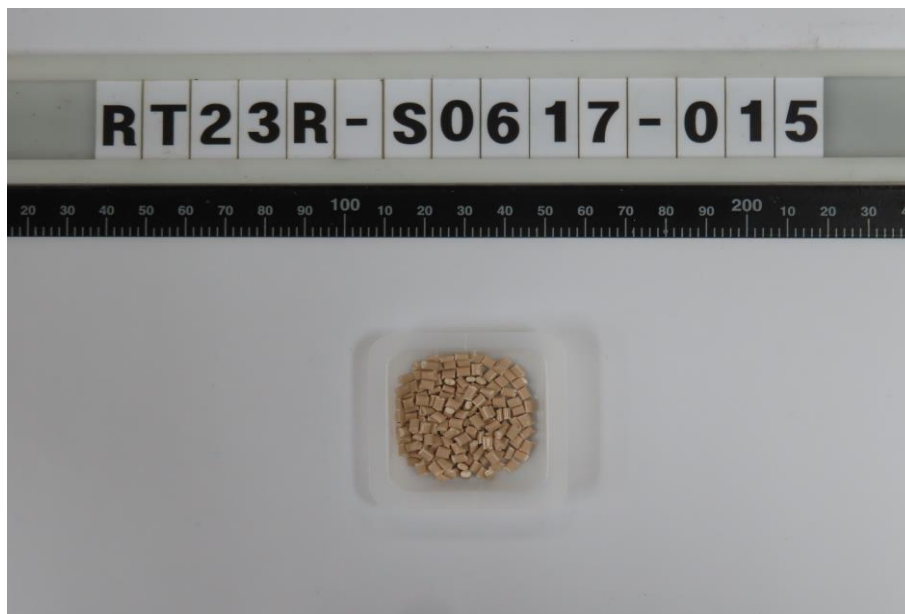
DATE: Feb. 08, 2023

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SAMPLE ID NO. : RT23R-S0617-015

SAMPLE DESCRIPTION : MRC365L1

\* View of sample as received;-



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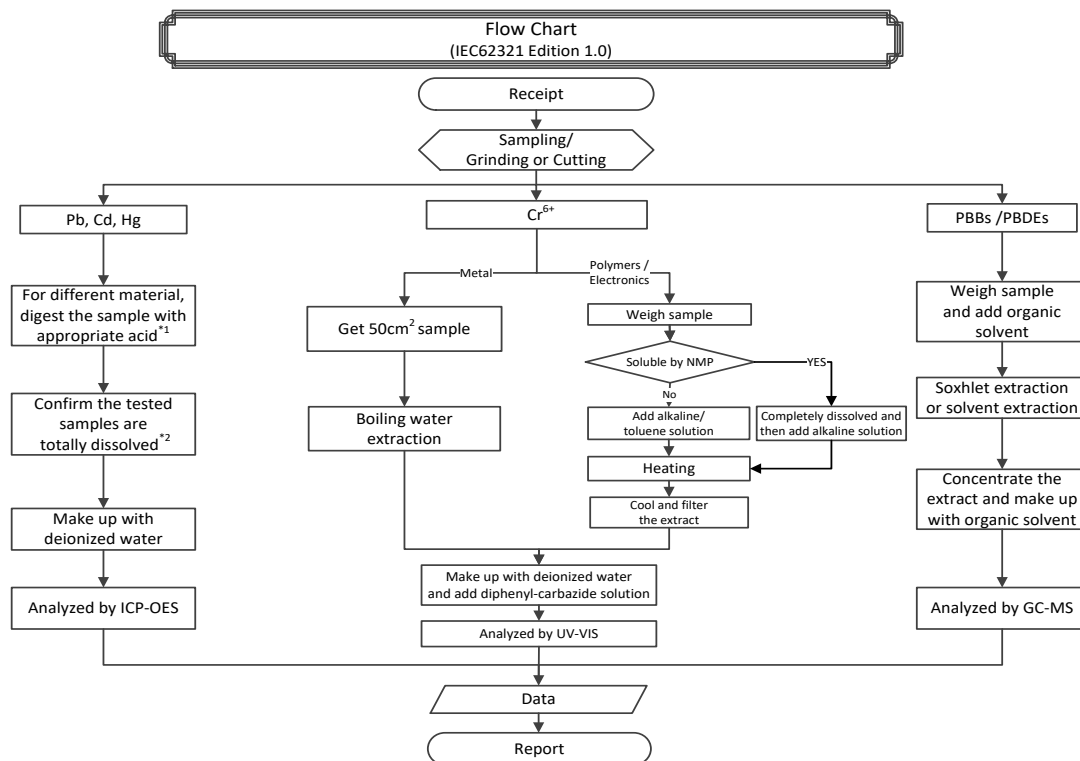
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SAMPLE DESCRIPTION : MRC365L1



**Remarks :**

\*1 : List of appropriate acid :

| Material    | Acid added for digestion                                                                   |
|-------------|--------------------------------------------------------------------------------------------|
| Polymers    | HNO <sub>3</sub> , HCl, HF, H <sub>2</sub> O <sub>2</sub> , H <sub>3</sub> BO <sub>3</sub> |
| Metals      | HNO <sub>3</sub> , HCl, HF                                                                 |
| Electronics | HNO <sub>3</sub> , HCl, H <sub>2</sub> O <sub>2</sub> , HBF <sub>4</sub>                   |

\*2 : The samples were dissolved totally by pre-conditioning method according to above flow chart.

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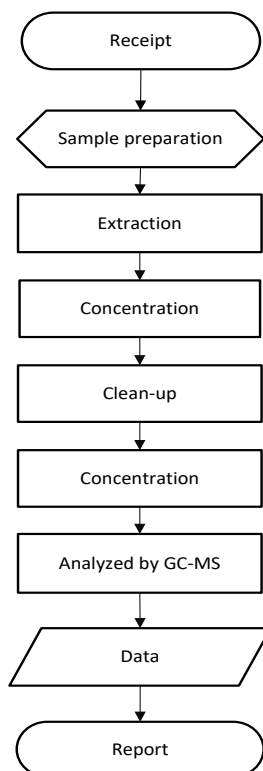
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### Flow Chart (Phthalates)



\*\*\*\*\* End of Report \*\*\*\*\*

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