



# Test Report

No.: ETR23701785M01

Date: 28-Jul-2023

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DATA SPECIALTIES CO., LTD. (DSL)

4F, NO. 1, LANE 112, RUEIGUANG ROAD, NEIHU DIST., TAIPEI CITY, 11491, TAIWAN (R.O.C.)

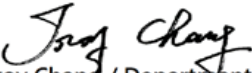
## The following sample(s) was/were submitted and identified by the applicant as:


Sample Submitted By : DATA SPECIALTIES CO., LTD. (DSL)  
 Sample Name : DRAM MODULE (DDR5/DDR4/DDR3/DDR2/DDR1 SERIES)  
 Style/Item No. : Dxxxxxxxxxxxxxxxxx (x='1~9' or 'A~Z' or '-' or BLACK)

=====  
 Sample Receiving Date : 07-Jul-2023  
 Testing Period : 07-Jul-2023 to 14-Jul-2023

Test Requested : As specified by client, to test Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP contents in the submitted sample(s).

Test Results : Please refer to following pages.

  
 Troy Chang / Department Manager  
 Signed for and on behalf of  
 SGS TAIWAN LTD.  
 Chemical Laboratory - Taipei




PIN CODE: 06E8E448

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## Test Part Description

No.1 : MIXED ALL PARTS

## Test Result(s)

Test Item(s)	Method	Unit	MDL	Result
				No.1
Cadmium (Cd)	With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.	mg/kg	2	n.d.
Lead (Pb)	With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.	mg/kg	2	13.0
Mercury (Hg)	With reference to IEC 62321-4: 2013+ AMD1: 2017, analysis was performed by ICP-OES.	mg/kg	2	n.d.
Hexavalent Chromium Cr(VI)	With reference to IEC 62321-7-2: 2017, analysis was performed by UV-VIS.	mg/kg	8	n.d.
Monobromobiphenyl	With reference to IEC 62321-6: 2015, analysis was performed by GC/MS.	mg/kg	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.
<b>Sum of PBBs</b>		mg/kg	-	n.d.
Monobromodiphenyl ether		mg/kg	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.	
<b>Sum of PBDEs</b>	mg/kg	-	n.d.	

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Test Item(s)	Method	Unit	MDL	Result
				No.1
Butyl benzyl phthalate (BBP)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.
Dibutyl phthalate (DBP)		mg/kg	50	n.d.
Diisobutyl phthalate (DIBP)		mg/kg	50	n.d.
Di-(2-ethylhexyl) phthalate (DEHP)		mg/kg	50	n.d.

**Note :**

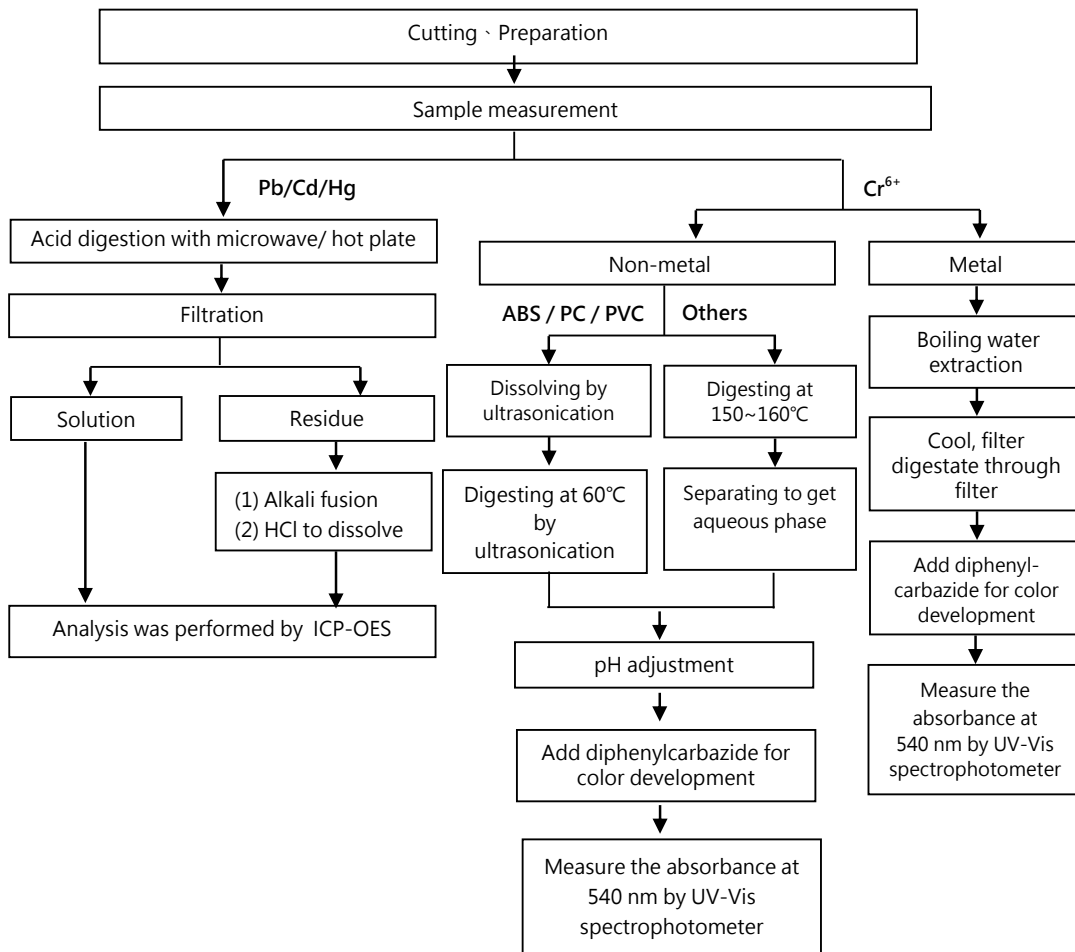
1. mg/kg = ppm ; 0.1wt% = 0.1% = 1000ppm
2. MDL = Method Detection Limit
3. n.d. = Not Detected ( Less than MDL)
4. "-" = Not Regulated
5. The sample(s) was/were analyzed on behalf of the applicant as mixing sample in one testing. The above result(s) was/were only given as the informality value.
6. This is the additional test report of ETR23701785.

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## Analytical flow chart of heavy metal

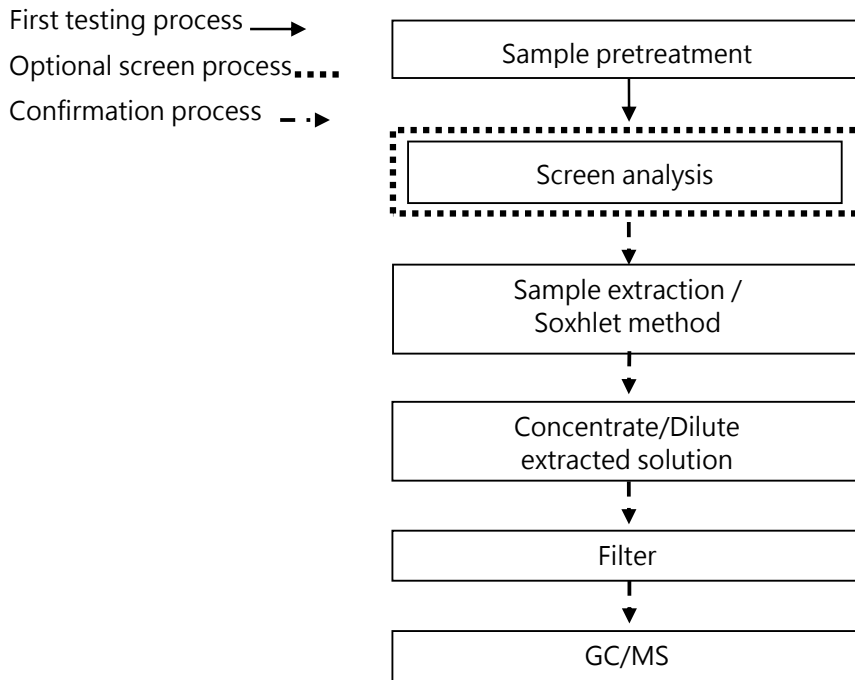
These samples were dissolved totally by pre-conditioning method according to below flow chart.

( Cr<sup>6+</sup> test method excluded )



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### Analytical flow chart – PBBs / PBDEs



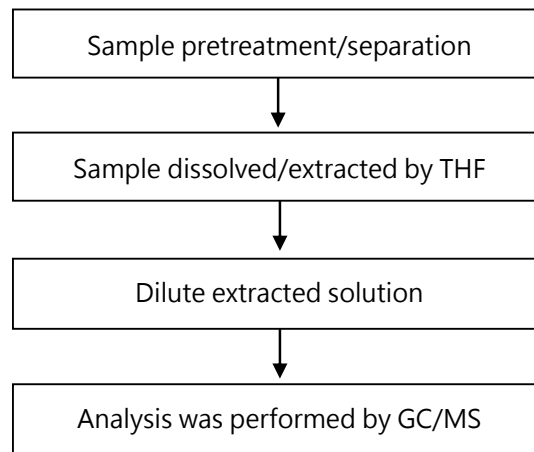
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## Analytical flow chart - Phthalate

【 Test method: IEC 62321-8 】



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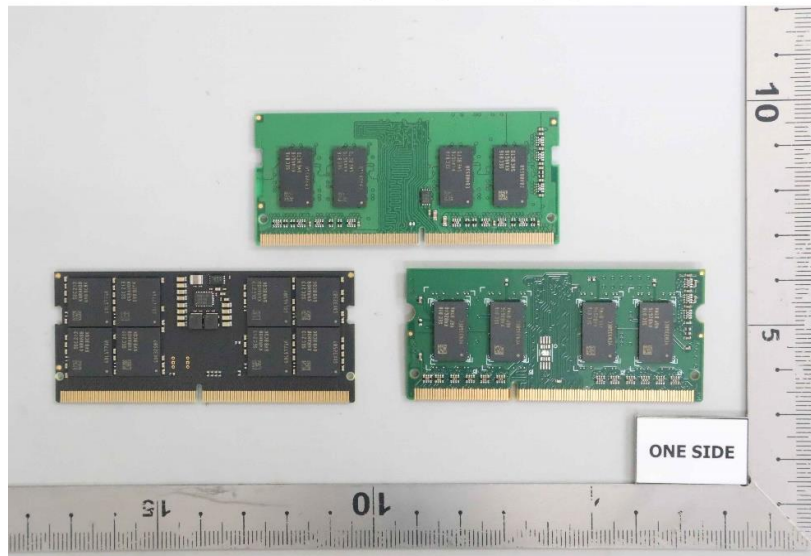
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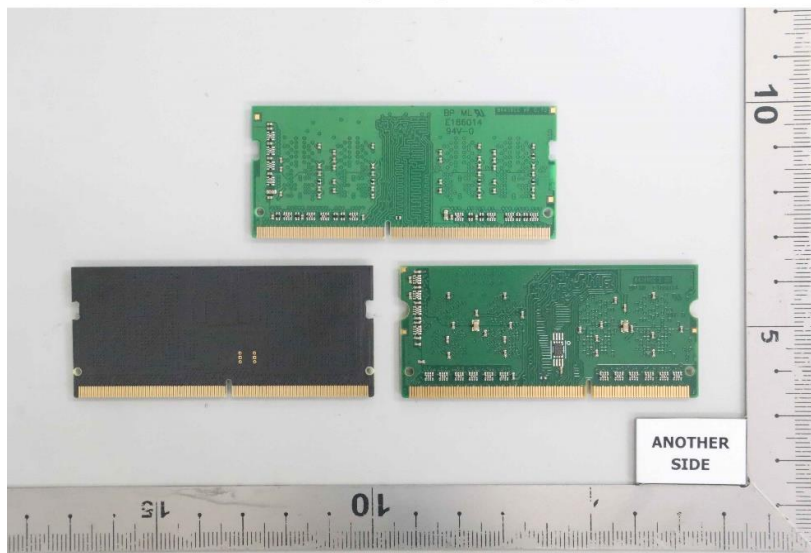
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\* The tested sample / part is marked by an arrow if it's shown on the photo. \*

### ETR23701785



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\*\* End of Report \*\*

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