

## Test Report

No. C190701015001

Date: Jul 10, 2019

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Applicant: WIZNET CO.,LTD  
Applicant Address: 5F Humax Village,216 Hwangsaetul-ro,  
Bundang-gu,Seongnam-si,Gyeonggi-Do,13595 Korea

The following samples were submitted and identified on behalf of the clients as

Sample Name: WiFi Module  
Model: WizFi630S  
Model/Type reference: N.A.  
Trademark: N.A.  
Manufacturer: Shenzhen Yunlink Technology CO., Ltd  
Manufacturer Address: B3 Building, An'le Industiral Zone, Hangcheng Road, Gushu, Xixiang Towm,  
Baoan District, Shenzhen City, Guangdong, P.R.China

CPST Internal Reference No.: C190701015  
Sample Received Date: Jul 01, 2019  
Number of Sample Received: 01 pcs  
Test Period: Jul 01, 2019 to Jul 10, 2019  
Test Method: Please refer to next pages  
Test Result: Please refer to next pages



Signed for and on behalf of  
Euronex Consumer Products Testing Service Co., Ltd

TESTED BY :

REVIEWED BY:

APPROVED BY:

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Wang Guang Yu, Andy  
Project Leader

*Sunshine Liu*

Liu Xiao Fang, Sunshine  
Report Reviewer

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# CPST

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### CONCLUSION :

<u>TESTED SAMPLES</u>	<u>TEST ITEM</u>	<u>RESULT</u>
WiFi Module	1. RoHS Directive 2011/65/EU Annex II amending Annex (EU)2015/863 and amending Annex (EU)2017/2102	
	— Lead, Cadmium, Mercury, Hexavalent Chromium, PBBs and PBDEs Content	<b>PASS</b>
	—Di-(2-ethylhexyl) phthalate(DEHP), Benzylbutyl phthalate(BBP), Dibutyl phthalate (DBP), Diisobutyl phthalate(DIBP) Content	<b>PASS</b>

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### 2. Test Item Description And Photo List

Sample No.	Description	Photograph
001	Black printed silver sticker	
002	Silver metal shell	
003	Blue glue	
004	Black ontology	
005	Black ontology	
006	Silver metal pin	
007	Silver metal plate	
008	Copper wire	
009	Black ontology	
010	Gray resistance	
011	Silver metal plate	
012	Copper metal sheet	
013	White plastic	
014	Blue PCB board	
015	Silver solder	

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### 3. Test Results

#### 3.1 Screening test for the specified hazardous substances of RoHS for the selected materials of the submitted sample:

- Heavy Metal (Cadmium, Chromium, Mercury, Lead) Content Test
- Bromine Content Test

According to IEC 62321-3-1:2013, and Quantification analyzed with Energy Dispersive X-ray Fluorescence Spectrometers.

Sample No.	Total Cadmium	Total Lead	Total Mercury	Total Chromium	Total Bromine
Sample 001	BL	BL	BL	BL	BL
Sample 002	BL	BL	BL	BL	N.A.
Sample 003	BL	BL	BL	BL	BL
Sample 004	BL	BL	BL	BL	BL
Sample 005	BL	BL	BL	BL	BL
Sample 006	BL	BL	BL	BL	N.A.
Sample 007	BL	BL	BL	BL	N.A.
Sample 008	BL	BL	BL	BL	N.A.
Sample 009	BL	BL	BL	BL	BL
Sample 010	BL	BL	BL	BL	BL
Sample 011	BL	BL	BL	BL	N.A.
Sample 012	BL	BL	BL	BL	N.A.
Sample 013	BL	BL	BL	BL	BL
Sample 014	BL	BL	BL	BL	Inconclusive <sup>^</sup>
Sample 015	BL	BL	BL	BL	N.A.

#### Note:

1. All Concentrations express in "mg/kg" (milligram per kilogram), mg/kg ~ ppm
2. "OL" denotes "over limit"
3. "BL" denotes "below limit"
4. "N.A." denotes "Not Applicable"
5. "Inconclusive" denotes result is intermediate between "OL" and "BL"
6. "<sup>^</sup>" denotes the screening result was inconclusive(X) or over limit (OL), thus further confirmation test was conducted, results are listed in 3.2 and 3.3.

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XRF screening limits for different materials:

Materials	Concentration (mg/kg)				
	Cd	Cr	Pb	Hg	Br
<b>Metal</b>	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	N.A.
<b>Polymers</b>	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (300-3\sigma) < X$
<b>Composite material</b>	$BL \leq (50-3\sigma) < X < (150+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$	$BL \leq (250-3\sigma) < X$

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### 3.2 Test for Heavy Metals

– Lead, Cadmium, Hexavalent Chromium and Mercury Tests according to IEC 62321-4:2013+A1:2017 & IEC 62321-5:2013 & IEC 62321-7-1:2015 & IEC 62321-7-2:2017

Element	Total Cadmium [mg/kg]	Total Lead [mg/kg]	Total Mercury [mg/kg]	Hexavalent Chromium [ $\mu\text{g}/\text{cm}^2$ ]	Hexavalent Chromium [mg/kg]
Detection Limit	5	5	5	0.10	5
Limit	100	1000	1000	0.10	1000

#### Note:

1. All Concentrations express in “mg/kg”(milligram per kilogram), mg/kg ~ ppm.
2. “N.D.” = “Not Detected”.
3. Boiling-water-extraction:  
Negative = Absence of Cr(VI) coating / surface layer: the detected concentration in boiling-water-extraction solution is less than  $0.10\mu\text{g}$  with  $1\text{cm}^2$  sample surface area.  
Positive = Presence of Cr(VI) coating / surface layer: the detected concentration in boiling-water-extraction solution is greater than  $0.13\mu\text{g}$  with  $1\text{cm}^2$  sample surface area.  
Inconclusive = the detected concentration in boiling-water-extraction solution is greater than  $0.10\mu\text{g}$  and less than  $0.13\mu\text{g}$  with  $1\text{cm}^2$  sample surface area.
4. Positive = result be regarded as not comply with RoHS requirement  
Negative = result be regarded as comply with RoHS requirement
5. “-” =Not regulated

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### 3.3 Test for Flame retardants

– Test Method: With reference to IEC 62321-6:2015, extracted by toluene and analyzed by Gas Chromatography and Mass Spectrometry (GC-MS). [Reporting Limit: 5mg/kg]

Test Item		Result [mg/kg]	RoHS Requirement [mg/kg]
		Sample 014	
PBBs	Monobromobiphenyl	< 5	Sum of PBBs < 1000
	Dibromobiphenyl	< 5	
	Tribromobiphenyl	< 5	
	Tetrabromobiphenyl	< 5	
	Pentabromobiphenyl	< 5	
	Hexabromobiphenyl	< 5	
	Heptabromobiphenyl	< 5	
	Octabromobiphenyl	< 5	
	Nonabromobiphenyl	< 5	
	Decabromobiphenyl	< 5	
	Sum of PBBs	< 5	
PBDEs	Monobromodiphenyl Ether	< 5	Sum of PBDEs < 1000
	Dibromodiphenyl Ether	< 5	
	Tribromodiphenyl Ether	< 5	
	Tetrabromodiphenyl Ether	< 5	
	Pentabromodiphenyl Ether	< 5	
	Hexabromodiphenyl Ether	< 5	
	Heptabromodiphenyl Ether	< 5	
	Octabromodiphenyl Ether	< 5	
	Nonabromodiphenyl Ether	< 5	
	Decabromodiphenyl Ether	< 5	
	Sum of PBDEs	< 5	

Note:

1. All Concentrations express in “mg/kg” (milligram per kilogram), mg/kg ~ ppm.
2. “<” denotes less than

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### 3.4 Di-(2-ethylhexyl) phthalate(DEHP), Benzylbutyl phthalate(BBP), Dibutyl phthalate (DBP), Diisobutyl phthalate (DIBP) Content—RoHS Directive 2011/65/EU Annex II amending Annex (EU)2017/2102

Test method: With reference to IEC 62321-8:2017; Analysis was conducted by GC-MS.

Element	Di-(2-ethylhexyl) phthalate (DEHP) [mg/kg]	Benzylbutyl phthalate (BBP) [mg/kg]	Dibutyl phthalate (DBP) [mg/kg]	Diisobutyl phthalate(DIBP) [mg/kg]
<b>Detection Limit</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>50</b>
<b>Limit</b>	<b>1000</b>	<b>1000</b>	<b>1000</b>	<b>1000</b>
Sample 001	N.D.	N.D.	N.D.	N.D.
Sample 003	N.D.	N.D.	N.D.	N.D.
Sample 004	N.D.	N.D.	N.D.	N.D.
Sample 005	N.D.	N.D.	N.D.	N.D.
Sample 009	N.D.	N.D.	N.D.	N.D.
Sample 010	N.D.	N.D.	N.D.	N.D.
Sample 013	N.D.	N.D.	N.D.	N.D.
Sample 014	N.D.	N.D.	N.D.	N.D.

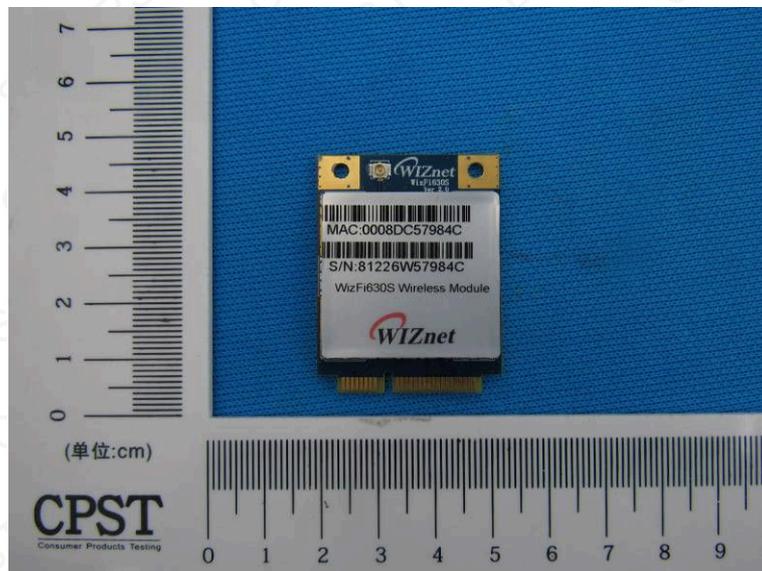
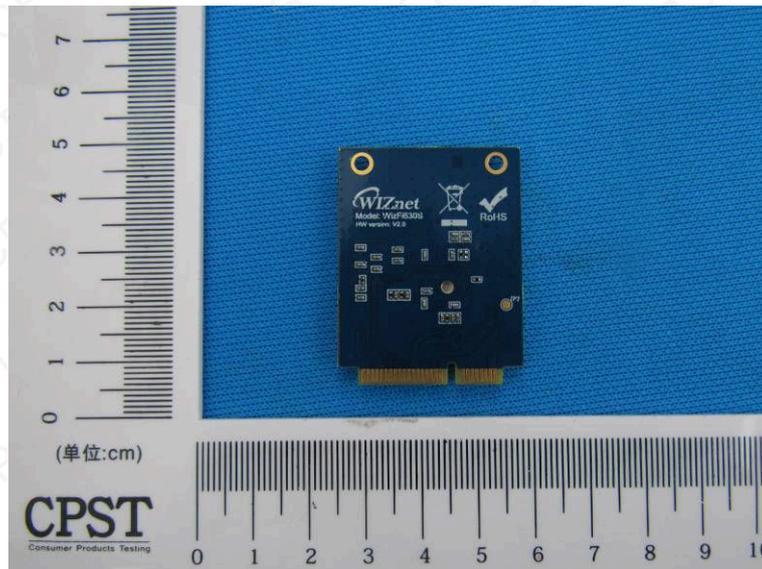
Note:

1. All Concentrations express in “mg/kg”(milligram per kilogram), mg/kg ~ ppm.
2. “N.D.” = “Not Detected”.

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### Photo of the Submitted Sample



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

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