

EMC Test Report

Client Name : Weixinli Food Machinery CO., Ltd.

Address : Mayu Town, Ruian City, Wenzhou City, Zhejiang Province, China

Product Name : Bain Marie

Date : Dec. 14, 2021

Shenzhen Anbotech Compliance Laboratory Limited



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TEST REPORT

Applicant : Weixinli Food Machinery CO., Ltd.
Manufacturer : Weixinli Food Machinery CO., Ltd.
Product Name : Bain Marie
Model No. : See Chapter 1.8 for model list
Trade Mark : CHINZAO
Rating(s) : 220-240V~, 50/60Hz,
(See Chapter 1.8 for model list)

Test Standard(s) : EN IEC 55014-1: 2021
EN IEC 61000-3-2:2019+A1:2021
EN 61000-3-3:2013+A1:2019
EN IEC 55014-2: 2021

The device described above is tested by Shenzhen Anbotech Compliance Laboratory Limited To determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. This report shows the EUT to be technically compliant with the EN IEC 55014-1, EN IEC 61000-3-2, EN 61000-3-3 and EN IEC 55014-2 requirements. The test results are contained in this report and Shenzhen Anbotech Compliance Laboratory Limited Is assumed full responsibility for the accuracy and completeness of these tests.

This report applies to above tested sample only and shall not be reproduced in part without written approval of Shenzhen Anbotech Compliance Laboratory Limited

Date of Receipt: Nov. 26, 2021

Date of Test: Nov. 29 ~ Dec. 02, 2021

Prepared By:

Yee Huang

(Yee Huang)

Approved & Authorized Signer:

KingKong Jin

(KingKong Jin)

1 General Information

1.1. Client Information

Applicant	:	Weixinli Food Machinery CO., Ltd.
Address	:	Mayu Town, Ruian City, Wenzhou City, Zhejiang Province, China
Manufacturer	:	Weixinli Food Machinery CO., Ltd.
Address	:	Mayu Town, Ruian City, Wenzhou City, Zhejiang Province, China
Factory	:	Weixinli Food Machinery CO., Ltd.
Address	:	Mayu Town, Ruian City, Wenzhou City, Zhejiang Province, China

1.2. Description of Device (EUT)

Product Name	:	Bain Marie
Model No.	:	See Chapter 1.8 for model list (Note: All samples are the same except the model number, appearance and power, so we prepare "RTC-6DA" for test only.)
Trade Mark	:	CHINZAO
Test Power Supply	:	AC 230V, 50Hz
Test Sample No.	:	1-1-1
Product Description	:	Adapter: N/A
Remark: (1) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.		

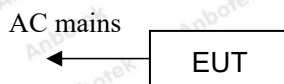
1.3. Auxiliary Equipment Used During Test

N/A	:	
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1.4. Description of Test Mode

Pretest Mode	Description
Mode 1	ON

For Mode 1 Block Diagram of Test Setup



1.5. Test Summary

Test Items	Test Mode	Status
Power Line Conducted Emission Test (150kHz To 30MHz)	Mode 1	P
Radiated Emission Test (30MHz To 1000MHz)	Mode 1	P
Harmonic Current Test	Mode 1	P
Voltage Fluctuations and Flicker Test	Mode 1	P
Electrostatic Discharge immunity Test	/	N
RF Field Strength susceptibility Test	/	N
Electrical Fast Transient/Burst Immunity Test	/	N
Surge Immunity Test	/	N
Injected Currents Susceptibility Test	/	N
Voltage Dips and Interruptions Test	/	N
P) Indicates "PASS".		
N) Indicates "Not applicable".		

Note: The EUT is Category I Products, No Requirement for EMS Testing.

1.6. Test Equipment List

Conducted Emission Measurement

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMI Test Receiver	Rohde & Schwarz	ESCI	100990	Sept. 7, 2021	1 Year
2.	L.I.S.N. Artificial Mains Network	Schwarzbeck	NSLK 8127	8127386	Sept. 7, 2021	1 Year
3.	L.I.S.N. Artificial Mains Network	Schwarzbeck	NSLK 8126	8126377	Sept. 7, 2021	1 Year
4.	Software Name	Ferrari Technology	EZ-EMC	EMC-CON 3A1.1	N/A	N/A

Radiated Emission Measurement

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMI Test Receiver	Rohde & Schwarz	ESPI	101604	Sept. 7, 2021	1 Year
2.	Pre-amplifier	EMtrace	RP01A	50017	Sept. 7, 2021	1 Year
3.	TRILOG Broadband Antenna	Schwarzbeck	VULB 9163	01417	Sept. 7, 2021	2 Year
4.	Software Name	Ferrari Technology	EZ-EMC	Anbo-3A1	N/A	N/A

Harmonic and Flicker Measurement

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Programmable AC Power source	IVYTECH	APS-5005A	632734	Oct. 26, 2021	1 Year
2.	Harmonic and Flicker Analyzer	EMC-PARTNER	HMONICS 1000-1P	164	Oct. 26, 2021	1 Year
3.	Harmonics-1000	N/A	Ed.3.0+4.0	N.A	N/A	N/A

1.7. Description of Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

FCC-Registration No.: 184111

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No. 184111.

ISED-Registration No.: 8058A

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registered and fully described in a report filed with the (ISED) Innovation, Science and Economic Development Canada. The acceptance letter from the ISED is maintained in our files. Registration 8058A.

Test Location

Shenzhen Anbotek Compliance Laboratory Limited.

1/F, Building D, Sogood Science and Technology Park, Sanwei community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China.518128



1.8. Model List

Model	Rating power	Model	Rating power
RTC-6DA	1.8kW	RTC-6D	1.8kW
RTC-2H	1.5kW	SB-2T	1.5kW
RTC-3H	1.5kW	SB-2P	1.2kW
RTC-4H	1.5kW	SB-4T	1.5kW
RTC-5H	1.8kW	SB-6T	1.5kW
RTC-3D	1.3kW	SB-6TR	1.5kW
RTC-4D	1.8kW	RTC-6H	1.8kW
RTC-5D	1.8kW		



2. Power Line Conducted Emission Test

2.1. Test Standard and Limit

Test Standard	EN IEC 55014-1
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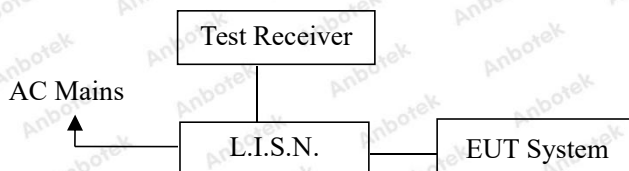
Limits for conducted emissions

Test Limit	Frequency (MHz)	At mains terminals (dBμV)	
		Quasi-peak Level	Average Level
	0.15 ~ 0.50	66.0 ~ 56.0*	59.0 ~ 46.0*
	0.50 ~ 5.00	56.0	46.0
	5.00 ~ 30.00	60.0	50.0

Remark: (1) The lower limit shall apply at the transition frequencies.

(2) The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to

2.2. Test Setup



2.3. EUT Configuration on Measurement

The following equipments are installed on Conducted Emission Measurement to meet EN IEC 55014-1 requirements and operating in a manner which tends to maximize its emission characteristics in a normal application.

2.4. Operating Condition of EUT

2.4.1. Setup the EUT as shown in Section 2.2.

2.4.2. Turn on the power of all equipments.

2.4.3. Let the EUT work in test mode and measure it.

2.5. Test Procedure

The EUT is put on the plane 0.8 m high above the ground by insulating support and connected to the AC mains through Line Impedance Stability Network (L.I.S.N). This provided a 50ohm coupling impedance for the tested equipments. Both sides of AC line are investigated to find out the maximum conducted emission according to the EN IEC 55014-1 regulations during conducted emission measurement.

The bandwidth of the field strength meter (R&S Test Receiver) is set at 9 kHz in 150 kHz~30MHz.

The frequency range from 150 kHz to 30MHz is investigated for AC mains.

All the test results are listed in Section 2.6.

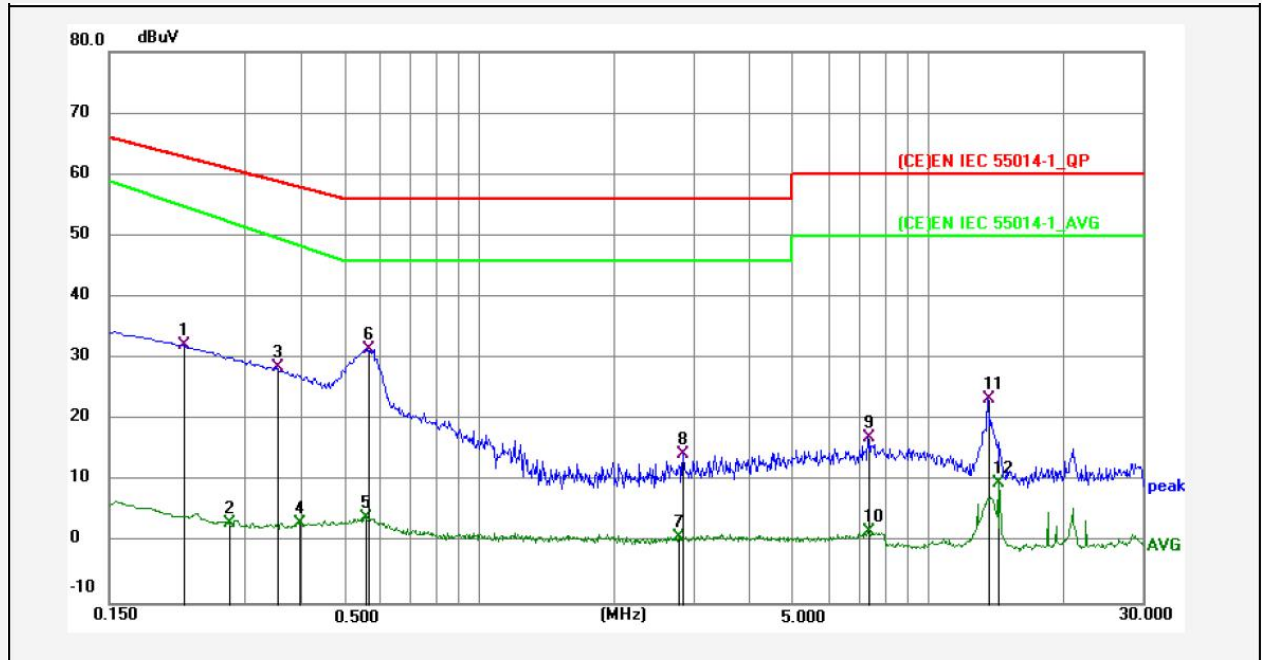
2.6. Test Results

PASS

The test curves are shown in the following pages.

Conducted Emission Test Data

Test Site: 1# Shielded Room
 Test Specification: AC 230V, 50Hz
 Comment: Live Line
 Temp.:18.8℃ Hum.: 50%

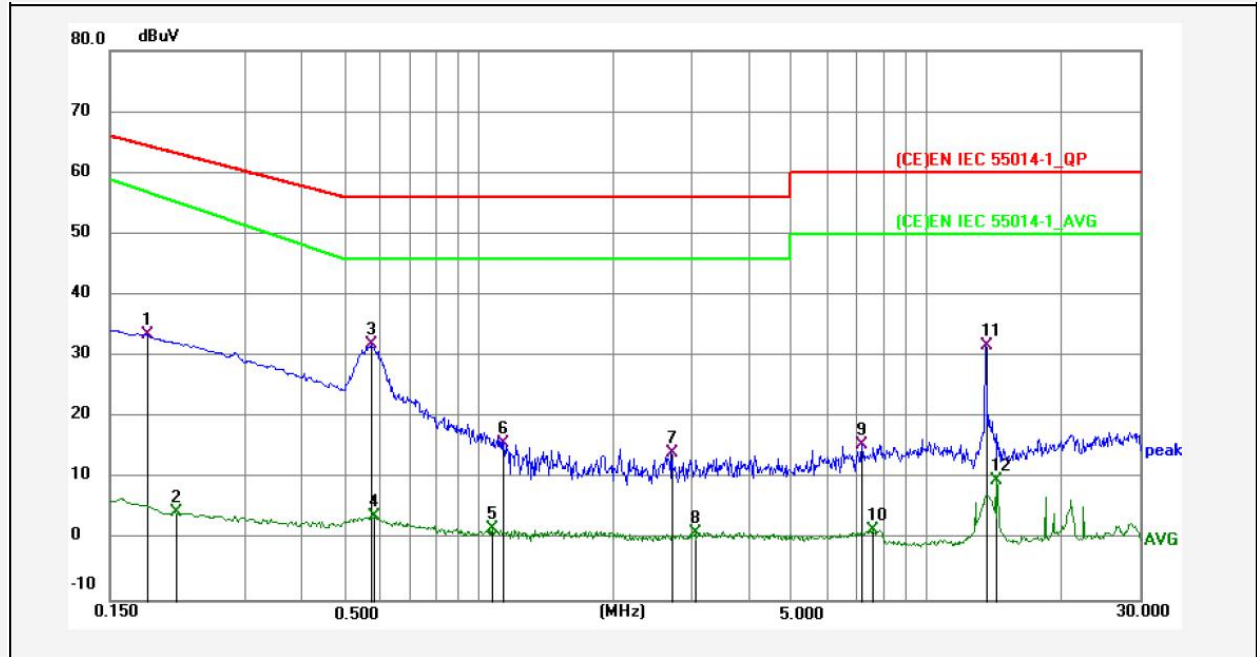


No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Over Limit (dB)	Detector	Remark
1	0.2175	31.38	0.87	32.25	62.91	-30.66	QP	
2	0.2760	2.35	0.91	3.26	52.42	-49.16	AVG	
3	0.3525	27.67	0.90	28.57	58.90	-30.33	QP	
4	0.3975	2.37	0.88	3.25	48.48	-45.23	AVG	
5	0.5595	3.28	0.88	4.16	46.00	-41.84	AVG	
6	0.5639	30.71	0.88	31.59	56.00	-24.41	QP	
7	2.7825	0.08	0.94	1.02	46.00	-44.98	AVG	
8	2.8410	13.53	0.94	14.47	56.00	-41.53	QP	
9	7.3545	16.11	0.97	17.08	60.00	-42.92	QP	
10	7.3545	0.89	0.97	1.86	50.00	-48.14	AVG	
11	13.6185	22.32	1.00	23.32	60.00	-36.68	QP	
12	14.3340	8.68	0.99	9.67	50.00	-40.33	AVG	

Note: Result=Reading+Factor Over Limit=Result-Limit

Conducted Emission Test Data

Test Site: 1# Shielded Room
Test Specification: AC 230V, 50Hz
Comment: Neutral Line
Temp.:18.8°C Hum.: 50%



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Over Limit (dB)	Detector	Remark
1	0.1815	32.59	0.88	33.47	64.42	-30.95	QP	
2	0.2085	3.59	0.86	4.45	55.44	-50.99	AVG	
3	0.5775	31.04	0.89	31.93	56.00	-24.07	QP	
4	0.5820	3.00	0.89	3.89	46.00	-42.11	AVG	
5	1.0725	0.79	0.94	1.73	46.00	-44.27	AVG	
6	1.1400	14.84	0.94	15.78	56.00	-40.22	QP	
7	2.7060	13.29	0.93	14.22	56.00	-41.78	QP	
8	3.0570	0.29	0.94	1.23	46.00	-44.77	AVG	
9	7.1835	14.61	0.97	15.58	60.00	-44.42	QP	
10	7.5930	0.64	0.98	1.62	50.00	-48.38	AVG	
11	13.5780	30.73	1.00	31.73	60.00	-28.27	QP	
12	14.3340	8.60	0.99	9.59	50.00	-40.41	AVG	

Note: Result=Reading+Factor Over Limit=Result-Limit



3. Radiated Emission Test

3.1. Test Standard and Limit

Test Standard	EN IEC 55014-1
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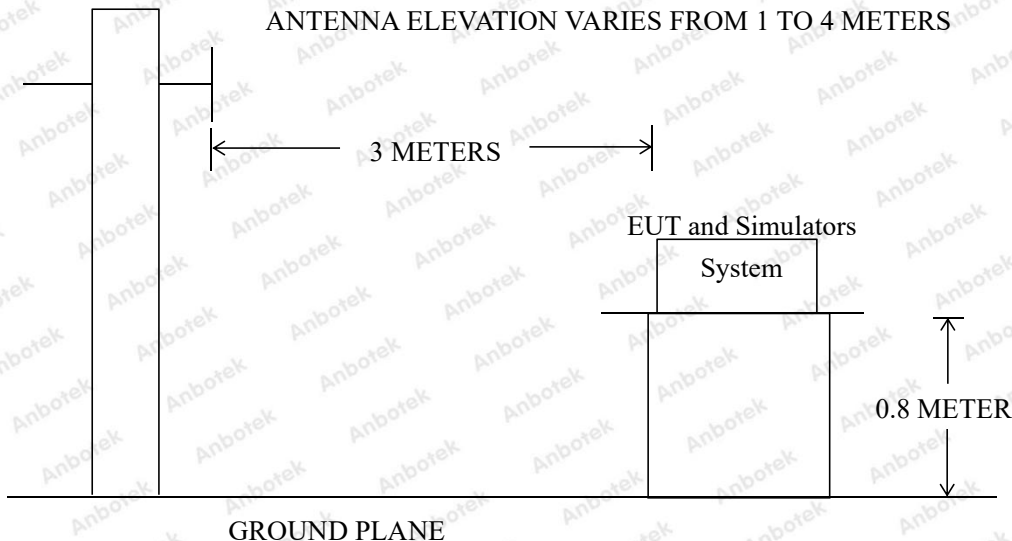
Radiated Emission Test Limit

Test Limit	Frequency (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMIT (dB μ V/m)
	30 ~ 230	3	40
	230 ~ 1000	3	47

Remark: (1) The smaller limit shall apply at the combination point between two frequency bands.

(2) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the EUT.

3.2. Test Setup



3.3. EUT Configuration on Measurement

The EN IEC 55014-1 regulations test method must be used to find the maximum emission during radiated emission measurement.

3.4. Operating Condition of EUT

3.4.1. Setup the EUT as shown in Section 3.2.

3.4.2. Turn on the power of all equipments.

3.4.3. Let the EUT work in test mode and measure it.

3.5. Test Procedure

The EUT is placed on a turn table which is 0.8 meter high above the ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna which is mounted on a antenna tower. The antenna can be moved up and down from 1 to 4 meters to find out the maximum emission level. Bilog antenna is used as a receiving antenna. Both horizontal and vertical polarization of the antenna are set on test.

The bandwidth of the Receiver is set at 120 kHz.

The EUT is tested in 9*6*6 Chamber.

The test results are listed in Section 3.6.

3.6. Test Results

PASS

The frequency range from 30MHz to 1000MHz is investigated.

The test curves are shown in the following pages.



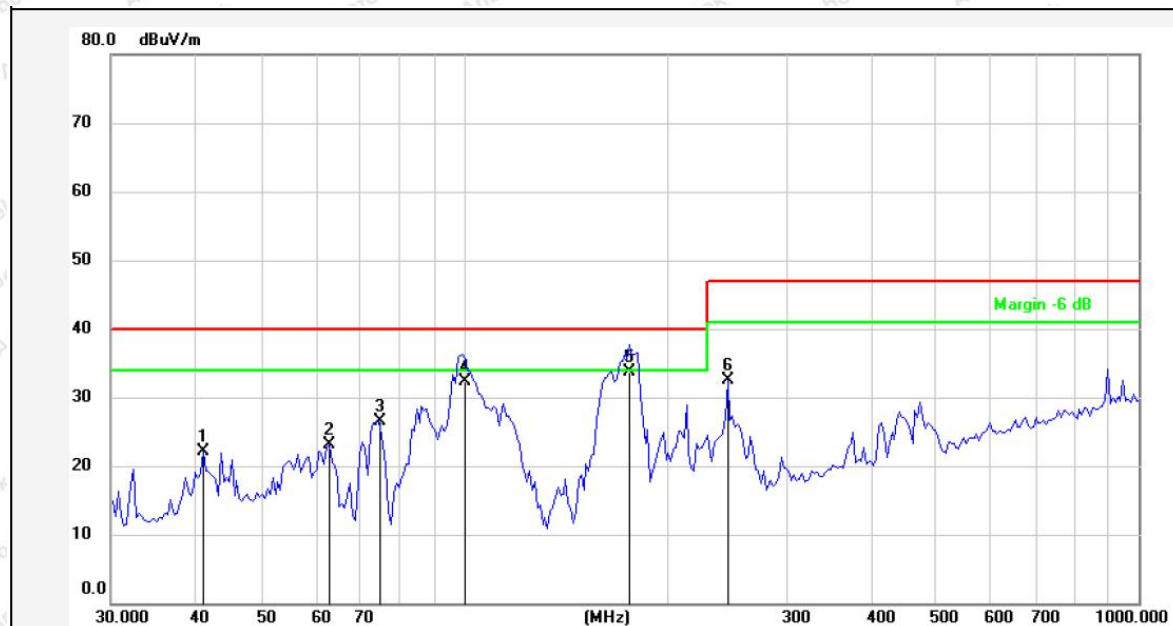
Test item: Radiation Test Polarization: Horizontal
Standard: (RE)EN IEC 55014-1 Power Source: AC 230V, 50Hz
Distance: 3m Temp.(°C)/Hum.(%RH): 20.5(°C)/50%RH



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	54.4516	34.50	-15.96	18.54	40.00	-21.46	peak			
2	74.0053	45.30	-21.23	24.07	40.00	-15.93	peak			
3	83.6688	48.03	-20.86	27.17	40.00	-12.83	peak			
4	98.8326	49.18	-17.52	31.66	40.00	-8.34	peak			
5	177.8207	49.93	-19.02	30.91	40.00	-9.09	peak			
6	245.9509	46.10	-15.02	31.08	47.00	-15.92	peak			

Note: Result=Reading+Factor Over Limit=Result-Limit

Test item: Radiation Test **Polarization:** Vertical
Standard: (RE)EN IEC 55014-1 **Power Source:** AC 230V, 50Hz
Distance: 3m **Temp.(°C)/Hum.(%RH):** 20.5(°C)/50%RH



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	41.1320	38.37	-16.35	22.02	40.00	-17.98	peak			
2	63.2023	40.58	-17.56	23.02	40.00	-16.98	peak			
3	74.6569	47.94	-21.37	26.57	40.00	-13.43	peak			
4	99.7028	49.79	-17.40	32.39	40.00	-7.61	QP			
5	176.2686	52.86	-19.16	33.70	40.00	-6.30	QP			
6	245.9509	47.58	-15.02	32.56	47.00	-14.44	peak			

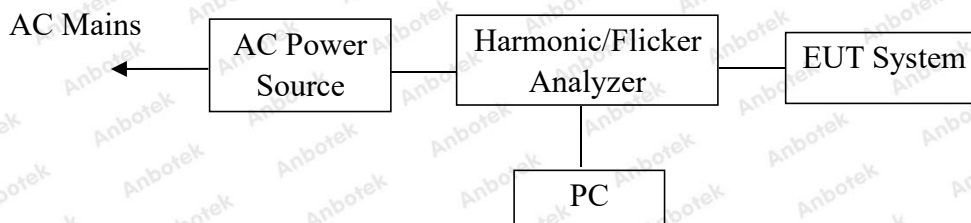
Note: Result=Reading+Factor Over Limit=Result-Limit

4. Harmonic Current Emission Test

4.1. Test Standard

Test Standard	EN IEC 61000-3-2
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4.2. Test Setup



4.3. Operating Condition of EUT

4.3.1. Setup the EUT as shown on Section 4.2.

4.3.2. Turn on the power of all equipments.

4.3.3. After that, let the EUT work in test mode measure it.

4.4. Test Results

PASS

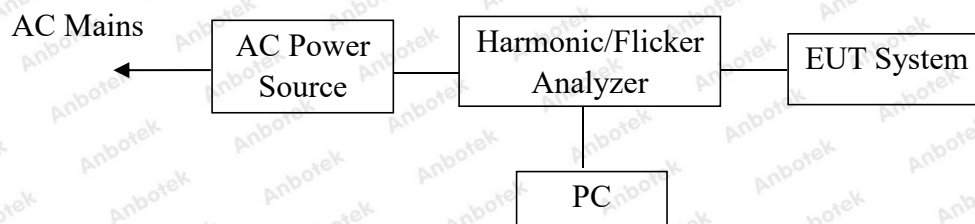


5. Voltage Fluctuations & Flicker Test

5.1. Test Standard

Test Standard	EN 61000-3-3
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5.2. Test Setup



5.3. Operating Condition of EUT

5.3.1. Setup the EUT as shown on Section 5.2.

5.3.2. Turn on the power of all equipments.

5.3.3. After that, let the EUT work in test mode measure it.

5.4. Test Results

PASS

APPENDIX I -- TEST SETUP PHOTOGRAPH

Photo of Power Line Conducted Emission Test

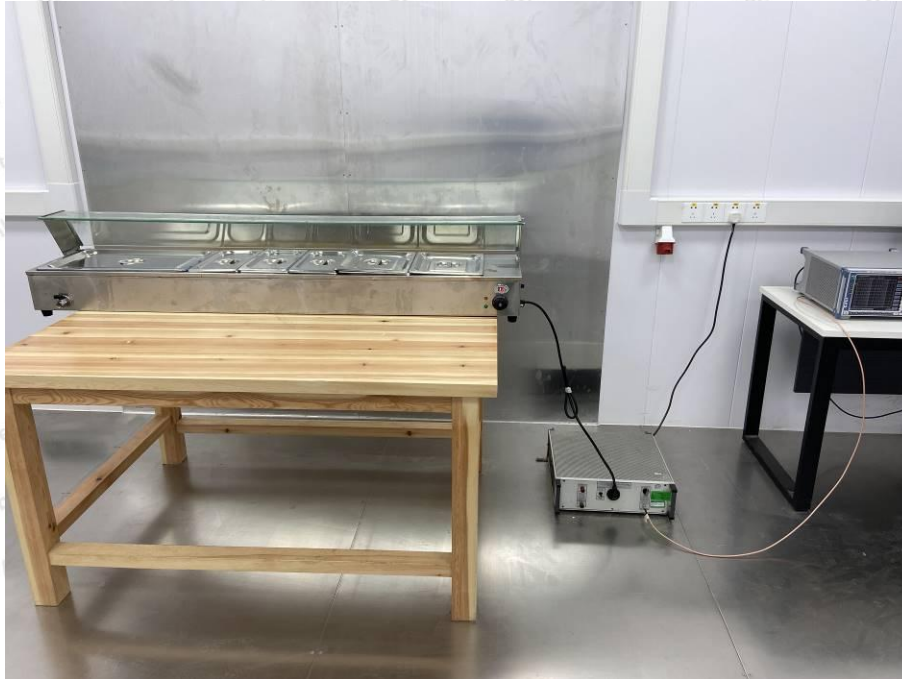


Photo of Radiated Emission Test



APPENDIX II -- Photo documentation

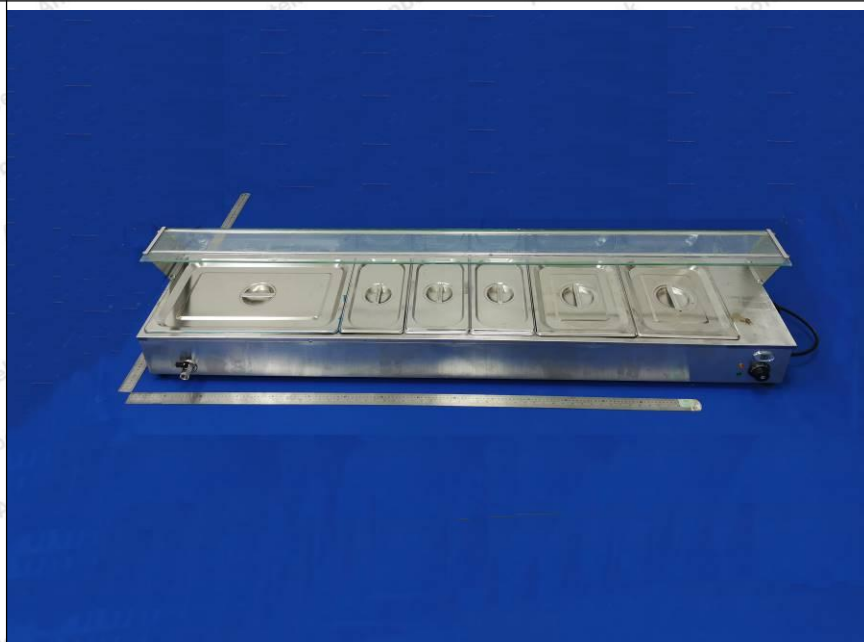
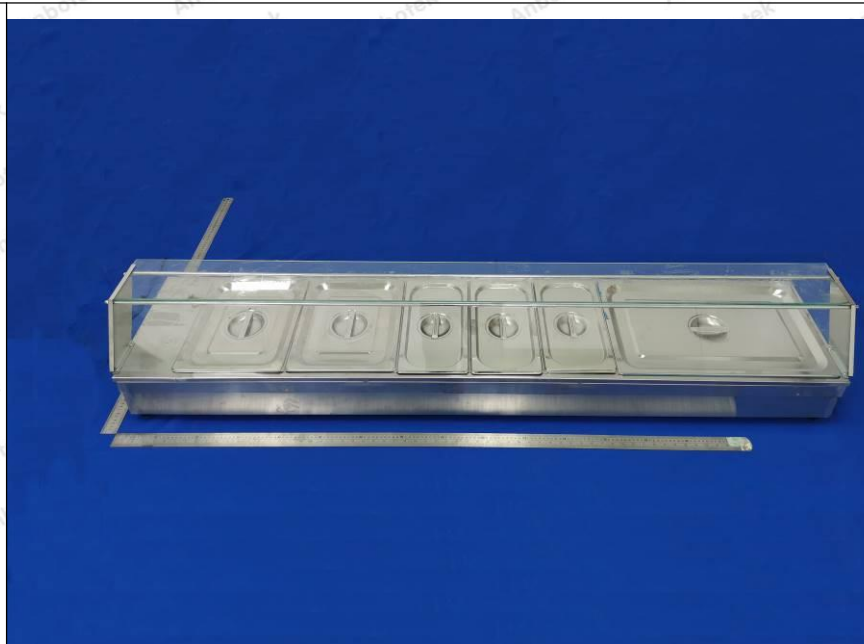
Photo 1**Front****Photo 2****Rear**

Photo 3**Side****Photo 4****Part**

Photo 5**Internal****Photo 6****Internal**

Photo 7**Photo 8**

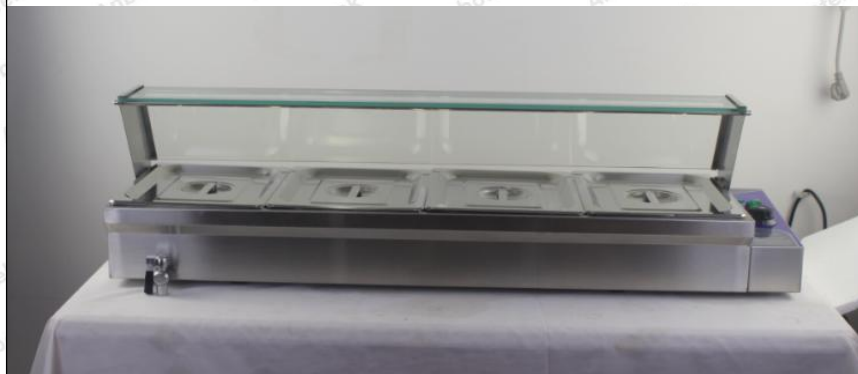
Photo 9**Photo 10**

Photo 11**Photo 12**

Photo 13

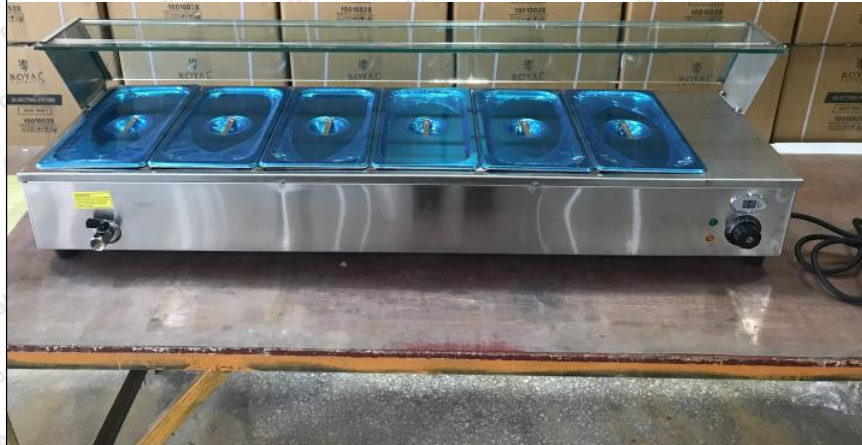


Photo 14



Photo 15**Photo 16**

Photo 17**Photo 18**

Photo 19**Photo 20**

Photo 21

CE Label

1. The CE conformity marking must consist of the initials 'CE' taking the following form:

If the CE marking is reduced or enlarged, the proportions given in the above graduated drawing must be respected.

2. The CE marking must have a height of at least 5 mm except where this is not possible on account of the nature of the apparatus.

3. The CE marking must be affixed to the product or to its data plate. Additionally it must be affixed to the packaging, if any, and to the accompanying documents.

4. The CE marking must be affixed visibly, legibly and indelibly.

It must have the same height as the initials 'CE'.

----- End of Report -----

