

FC FCC REPORT

Prepared For:	Shenzhen Nukit Technology LLC Longgang district, Shenzhen
Manufacturer:	Shenzhen Nukit Technology LLC Longgang district, Shenzhen
Product Name:	Lantern
Trade Mark:	Nukit
Main Test Model:	Lantern
Additional Model:	Lantern
Prepared By:	MYTS Testing (Shenzhen) Co.,Ltd 1019-F35,XinhuaInsuranceBuilding,No.171MintianRoad,Fu'anCommunity, FutianStreet,FutianDistrict,Shenzhen
Test Date:	Jun.28.2024 To July.03.2024
Date of Report:	July.03.2024
Report No. :	MYTS24200703V5AK49-CS

TABLE OF CONTENTS

TEST REPORT DECLARATION	3
1. GENERAL INFORMATION	4
1.1. Report information	4
1.2. Measurement Uncertainty	4
1.3. Test Facility	4
1.4. Test Uncertainty	4
2. PRODUCT DESCRIPTION	5
2.1. EUT Description	5
2.2. Test Conditions	5
3. TEST RESULTS SUMMARY	6
4. TEST EQUIPMENT USED	7
4.1. For Conducted Emission Test	7
4.2. For Radiated Emission Measurement	7
5. CONDUCTED EMISSION TEST	8
5.1. Block Diagram of Test Setup	8
5.2. Test Standard	8
5.3. Conducted Emission Limit (Class B)	8
5.4. EUT Configuration on Test	8
5.5. Operating Condition of EUT	9
5.6. Test Procedure	9
5.7. Test Result	9
6. RADIATED EMISSION MEASUREMENT	10
6.1. Block Diagram of EUT Configuration	10
6.2. Test Standard	10
6.3. Radiated Emission Limit (Class B)	10
6.4. EUT Configuration on Test	11
6.5. Operating Condition of EUT	11
6.6. Test Procedure	11
6.7. Test Result	11
APPENDIX II	16

TEST REPORT DECLARATION

Applicant	:	Shenzhen Nukit Technology LLC
Address	:	Longgang district, Shenzhen
Manufacturer	:	Shenzhen Nukit Technology LLC
Address	:	Longgang district, Shenzhen
EUT Description	:	Lantern
Model Number	:	Lantern
Rating	:	Lantern

Test Standards:

FCC Part 15:2016

The EUT described above is tested by US to determine the maximum emission levels emanating from the EUT, the maximum emission levels are compared to the FCC Part 15 limits. The measurement results are contained in this test report. and MYTS Testing (Shenzhen) Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT is to be technically compliant with the FCC requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of MYTS Testing (Shenzhen) Co., Ltd.

Tested by:

Vilen

Test Engineer

Reviewer :



Approved & Authorized Signer :

Steve

1. GENERAL INFORMATION

1.1. Report information

- 1.1.1. This report is not a certificate of quality; it only applies to the sample of the specific product/equipment given at the time of its testing. The results are not used to indicate or imply that they are application to the similar items. In addition, such results must not be used to indicate or imply that STF approves recommends or endorses the manufacture, supplier or use of such product/equipment, or that STF in any way guarantees the later performance of the product/equipment.
- 1.1.2. The sample/s mentioned in this report is/are supplied by Applicant, STF therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture or any information supplied.
- 1.1.3. Additional copies of the report are available to the Applicant at an additional fee. No third part can obtain a copy of this report through STF, unless the applicant has authorized SHTF in writing to do so.

1.2. Measurement Uncertainty

Available upon request.

1.3. Test Facility

The test site used to collect the data is located on the address of MYTS Testing Co., LTD. (FCC Registered Test Site Number: 191509) on No.7, New Era Industrial Zone, Guantian, Bao'an District, Shenzhen, 518000 China
The Test Site is constructed and calibrated to meet the FCC requirements.

1.4. Test Uncertainty

Conducted Emission Uncertainty = $\pm 2.66\text{dB}$
Radiated Emission Uncertainty = $\pm 4.26\text{dB}$

2. PRODUCT DESCRIPTION

2.1.EUT Description

Description	:	Lantern
Applicant	:	Shenzhen Nukit Technology LLC
Address	:	Longgang district, Shenzhen
Manufacturer	:	Shenzhen Nukit Technology LLC
Address	:	Longgang district, Shenzhen
Model Number	:	Lantern

2.2.Test Conditions

Temperature: 23~25℃
Relative Humidity: 55~63 %

3. TEST RESULTS SUMMARY

Table 1 Test Results Summary	
Test Items	Test Results
Conducted disturbance	N/A
Radiated disturbance	Pass

Remark: “N/A ” means “Not applicable.”

4. TEST EQUIPMENT USED

4.1.For Conducted Emission Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESHS30	828985/018	Apr. 11, 23	1 Year
2.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100006	Apr. 11, 23	1 Year
3.	L.I.S.N.	Rohde & Schwarz	ESH2-Z5	834549/005	Apr. 11, 23	1 Year
4.	Conical	Emtek	N/A	N/A	N/A	N/A
5.	Voltage Probe	Schwarzbeck	TK9416	N/A	Apr. 11, 23	1 Year
6.	Coaxial Switch	Anritsu	MP59B	6100214550	Apr. 11, 23	1 Year

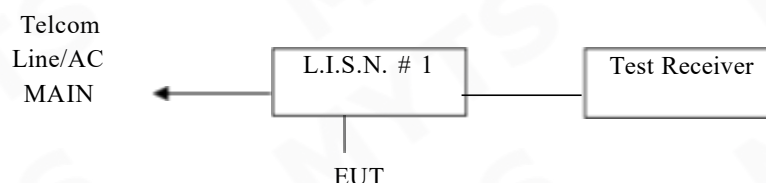
4.2.For Radiated Emission

Measurement Semi-Anechoic
Chamber

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	ANRITSU	MS2661C	6200140915	Apr. 11, 23	1 Year
2.	Test Receiver	Rohde&Schwarz	ESC830	828982/018	Apr. 11, 23	1 Year
3.	Bilog Antenna	Schwarzbeck	VULB9163	142	Apr. 11, 23	1 Year
4.	50 Coaxial Switch	Anritsu Corp	MP59B	6100237248	Apr. 11, 23	1 Year
5.	Cable	Schwarzbeck	AK9513	ACRX1	Apr. 11, 23	1 Year
6.	Cable	Rosenberger	N/A	FR2RX2	Apr. 11, 23	1 Year
7.	Cable	Schwarzbeck	AK9513	CRRX2	Apr. 11, 23	1 Year
8.	Cable	Schwarzbeck	AK9513	CRRX2	Apr. 11, 23	1 Year
9.	Single Phase Power Line Filter	MPE	23332C	N/A	Apr. 11, 23	1 Year
10.	Single Phase Power Line Filter	MPE	23333C	N/A	Apr. 11, 23	1 Year
11.	Signal Generator	HP	864A	3625U00573	Apr. 11, 23	1 Year

5. CONDUCTED EMISSION TEST

5.1. Block Diagram of Test Setup



5.2. Test Standard

FCC Part 15: 2016

5.3. Conducted Emission Limit (Class B)

Frequency MHz	Limits dB(μ V)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66 ~ 56*	56 ~ 46*
0.50 ~ 5.00	56	46
5.00 ~ 30.00	60	50

Notes: 1. *Decreasing linearly with logarithm of frequency.

5.4. EUT Configuration on Test

The following equipments are installed on conducted emission test to meet Part 15 requirement and operating in a manner, which tends to maximize its emission characteristics in a normal application.

5.4.1. EUT Information

Model Number : Lantern

Serial Number : Lanterns

5.5.Operating Condition ofEUT

5.5.1.Setup the EUT and simulators as shown in Section 5.1.

5.5.2.Turn on the power of all equipments.

5.5.3.Let the EUT work in test modes (EUT Working) and test it.

5.6.Test Procedure

The EUT is put on a table of non-conducting material that is 80cm high. The vertical conducting wall of shielding is located 40cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI test receiver (R&S Test Receiver ESCS30) is used to test the emissions from both sides of AC line. The bandwidth of EMI test receiver is set at 9kHz.

The bandwidth of the test receiver (R&S Test Receiver ESHS30) is set at 10KHz.

5.7.Test Result

N.A

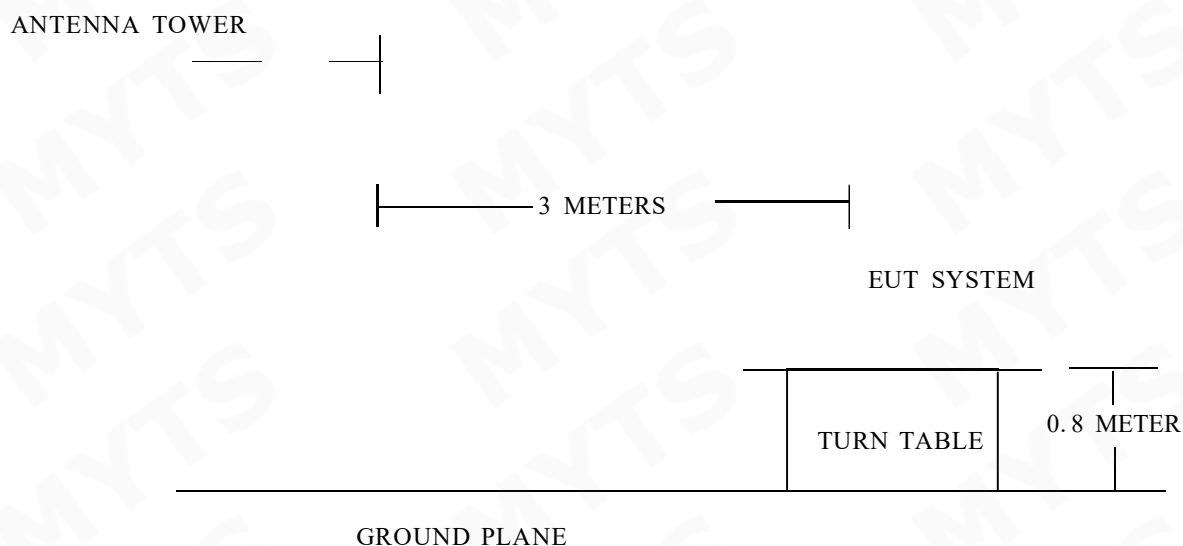
6. RADIATED EMISSION MEASUREMENT

6.1. Block Diagram of EUT Configuration

6.1.1. Block Diagram of connection between the EUT and the simulators



6.1.2. Semi-Anechoic Chamber Test Setup Diagram



6.2. Test Standard

FCC Part 15: 2016

6.3. Radiated Emission Limit (Class B)

FREQUENCY (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMITS (dB μ V/m)
30 ~ 88	3	40.0
88 ~ 216	3	43.5
216 ~ 960	3	46.0
960 ~ 1000	3	54.0

Note:(1) The smaller limit shall apply at the edge 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 or system.

6.4.EUT Configuration on Test

The following equipment are installed on Radiated Emission Measurement to meet the Commission requirements and operating regulations in a manner which tends to maximize Its emission characteristics in normal application.

6.5.Operating Condition ofEUT

6.5.1.Setup the EUT as shown on Section 6.1.2

6.5.2.Turn on the power of all equipments.

6.5.3.Let the EUT work in test mode(EUT working) and measure it.

6.6.Test Procedure

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position ofthe maximum emission level. The EUT is set 3 meters away from the receiving antenna which is mounted on a antenna tower. The antenna can move up and down between 1 to 4 meters to find out the maximum emission level.

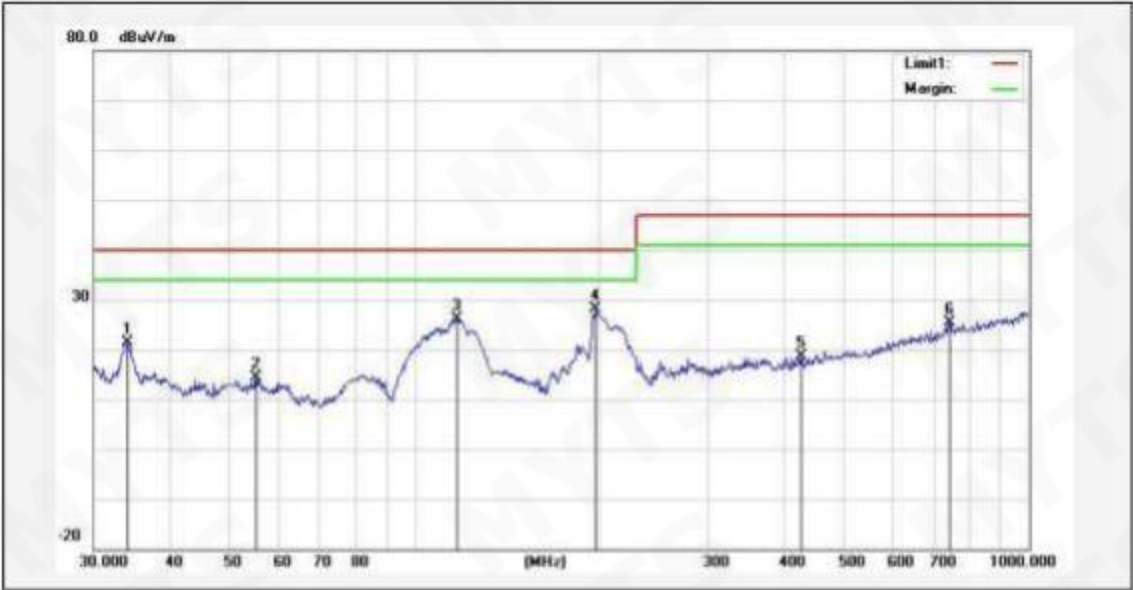
Broadband antenna (calibrated by dipole antenna) are used as a receiving antenna. Both horizontal and vertical polarization ofthe antenna are set on measurement.

The bandwidth setting on the test receiver (R&S TEST RECEIVER ESCS20) is 120 KHz. The EUT is tested in Semi-Anechoic Chamber. The frequency range from 30MHz to 1000 MHz is checked.All the test results are listed in Section 6.7. and all the scanning waveform are attached within **Appendix I**.

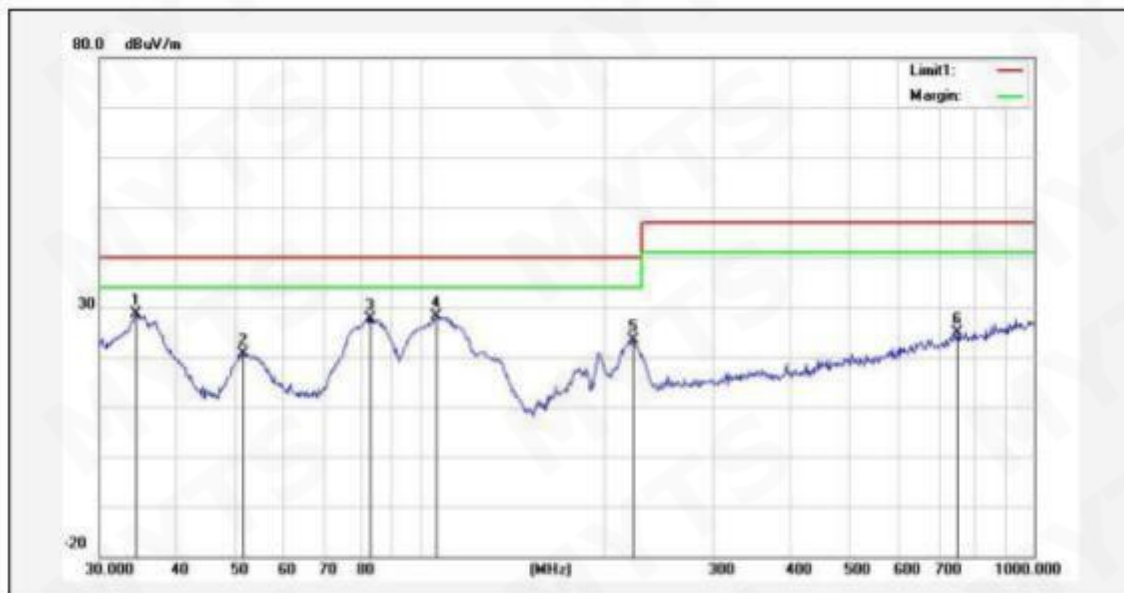
6.7.Test Result

PASS

APPENDIX I Test Curves



No.	Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (deg.)	Height (cm)	Remark
1	34.0365	37.12	-15.62	21.50	40.00	-18.50			peak
2	55.2207	31.17	-16.87	14.30	40.00	-25.70			peak
3	117.3603	45.42	-19.19	26.23	40.00	-13.77			peak
4	196.5098	44.22	-16.17	28.05	40.00	-11.95			peak
5	425.0280	30.59	-11.91	18.68	47.00	-28.32			peak
6	742.2587	30.44	-5.07	25.37	47.00	-21.63			peak



No.	Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (deg.)	Height (cm)	Remark
1	34.3964	44.52	-15.86	28.66	40.00	-11.34			peak
2	51.4807	37.10	-16.45	20.65	40.00	-19.35			peak
3	82.9385	49.15	-21.40	27.75	40.00	-12.25			peak
4	106.3850	45.25	-17.22	28.03	40.00	-11.97			peak
5	222.1698	38.66	-15.39	23.27	40.00	-16.73			peak
6	750.1083	29.79	-4.82	24.97	47.00	-22.03			peak

APPENDIX II

(Photos of the EUT)

Photo 1 General appearance of the EUT

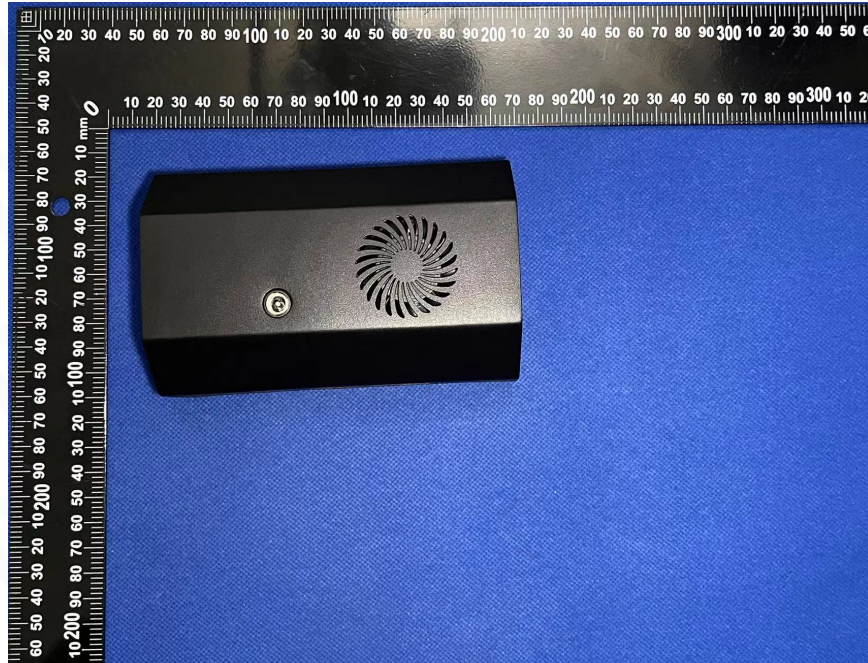
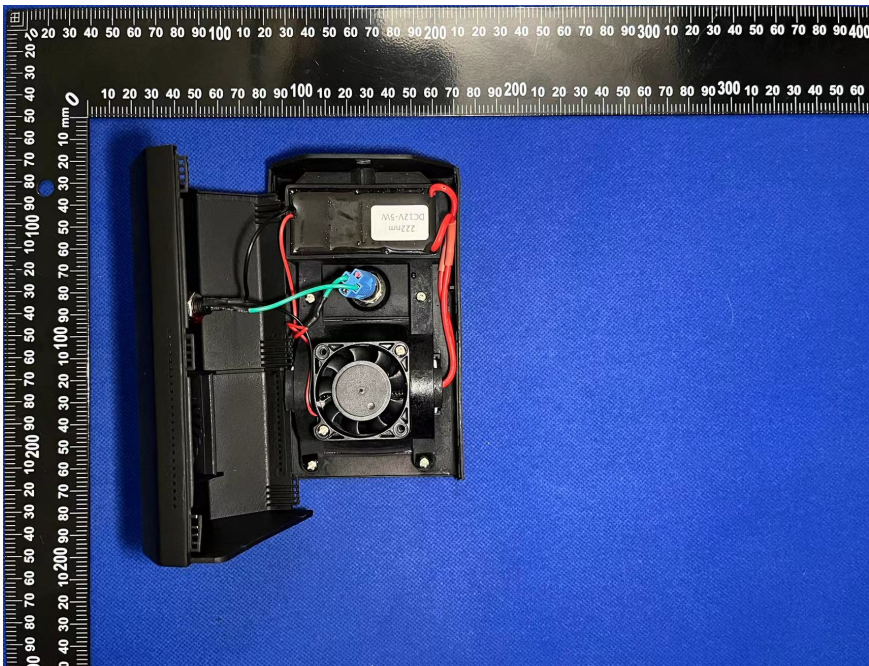
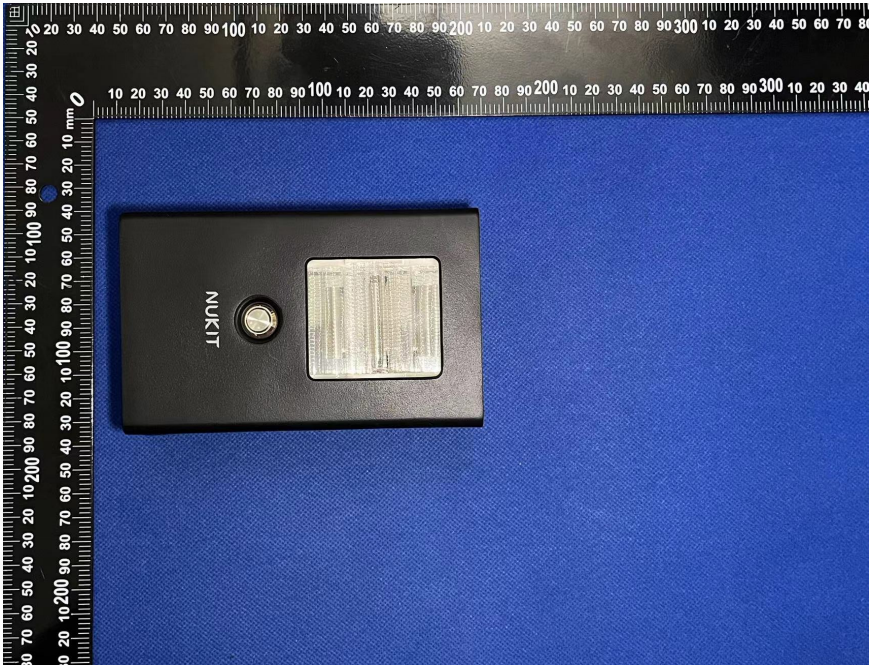


Photo 2 General appearance of the EUT



Conditions of Issuance of Test Reports

- 1.All samples and goods are accepted by the Shenzhen ManYi Testing Technology Co. , Ltd. (the “ Company ”) solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the company and any person, firm or company requesting its services (the “ Clients”).
- 2.Any report issued by Company as a result of this application for testing services (the “ Report”) shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to its customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.
- 3.The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.
4. In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.
5. Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
6. The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.
- 7.Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.
8. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.
9. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.

*** End of report***